RAPTORMED

User's Manual

Version 3.17.34
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Introduction

RaptorMed is a patient management software package originally designed for the unique needs of birds of prey. It was created and developed by Dr. Dave Scott and the staff at the Carolina Raptor Center in Charlotte, NC in 2009. It has since been expanded to handle any type of wildlife of zoo patient including aquatics.

It is very easy to use, requires very little in the way of computing resources and has a very long list of useful functions and features that are designed to improve staff efficiency and the quality of care. In addition, because there is powerful database running behind-the-scenes, the data that is collected in the system is now completely searchable. With **RaptorMed**, you can "go paperless" as there is no need for traditional paper records anymore.

Here is just a short sample of the many things that **RaptorMed** does:

- Track daily treatments and feedings
- Schedule medications and procedures
- Auto-calculate drug dosages
- Track the exact location of every animal
- Track each patient's problem list
- Track weight and growth curves
- Monitor physical therapy and feather check results
- Store all imagery files and lab results
- Generate all sorts of historical statistics
- Estimate the cost of care for a patient
- Produce all federal and state reports automatically
- Produce Bandit reports automatically
- Manage volunteers
- Track inventory

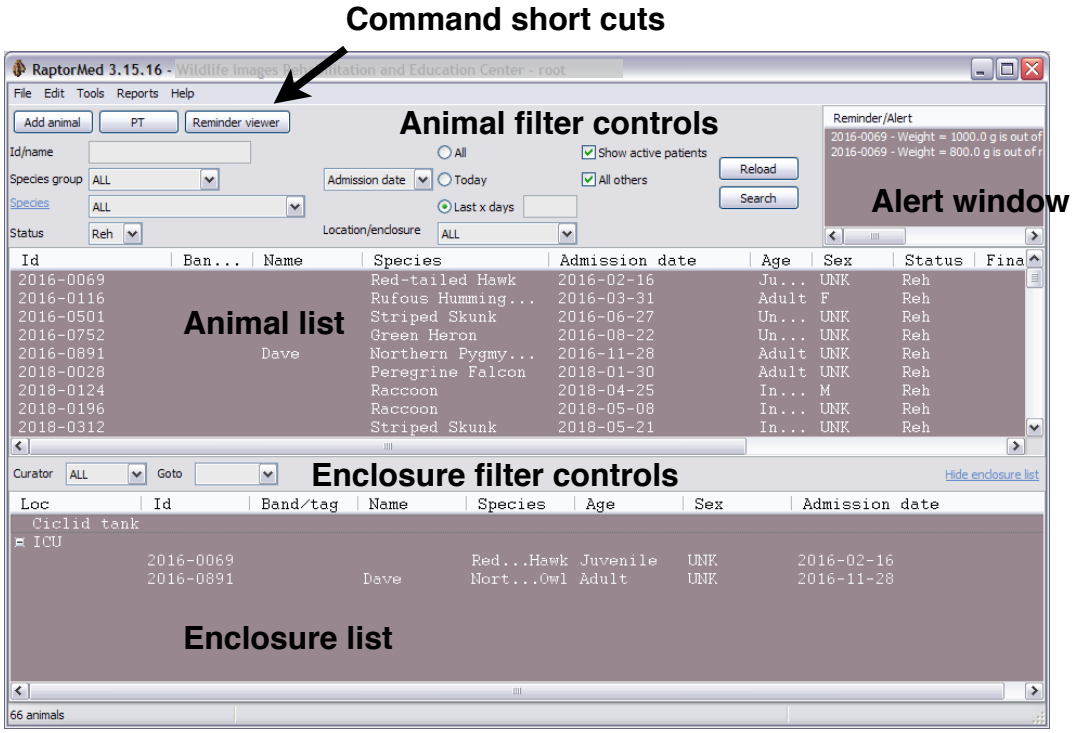
Chapter 1

The main screen
Adding a new animal
Viewing an animal's chart
Basic patient information

The main screen

Besides the main menu, the main screen is divided into four areas:

- The command shortcut buttons. Click **here** for more information about creating shortcuts.
- The filter controls that determine which animals are displayed in the animal list.
- The animal list which displays all animals defined by the filter controls above.
- Filter controls that determine which enclosures are display in the enclosure list.
- The enclosure list. The enclosure list can be hidden and restored by pressing the **Hide enclosure list** and **Show enclosure list** links.
- The **Alert** window



The filter controls

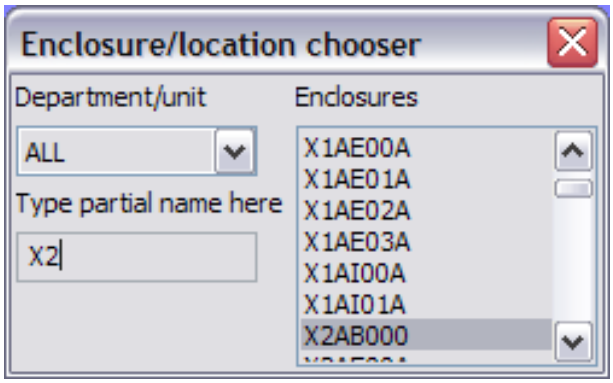
The filter bar allows the animal list to be filtered by various attributes including:

- **Id/name** - This allows a single animal to be found either by id number or by name. If entered, all other attributes are ignored and only the specified animal will be listed.

- **Species group** - The represent broad categories of species. They can be user-defined and can be, for example, avian, avian:raptor, avian:songbird, mammal, mammal:rodent, etc.
- **Species -** You can choose a species from the list or press the **Species** link to use the **Species Lookup Tool**. This displays the each species with it's abbreviation, common name, scientific name and species group. You can sort by any column by clicking on the column heading. Select a species and press the **Ok** button or simply double-click on one.
- **Status/Disposition**
- **Admission date** or **Final date** - Select **All**, **Today**, or specify the number of days in the past.
- **Location** - Choose to view animals in only one specific location or all locations. If enabled on your system, you can click the **Location/enclosure** link to show the **Enclosure/location chooser**. This is useful for installations with a large number of individual enclosures. The Enclosure/location chooser allows you to find a specific enclosure by choosing a Department/unit and also by typing a partial enclosure name.
- **Spill** - If this feature is enabled, you can filter by the oil spill event that this animal is associated with. Spill events are tracked with the Spill manager.
- **Active patient status** - View only active and/or inactive patients. An active patient is defined as one that has the Active patient checkbox checked. This is typically used to flag patients that are acutely injured and still in need of more hands-on attention.

The patient status codes are:

DOA - dead on arrival
EOA - euthanized on arrival
D24 - died in the first 24 hours
E24 - euthanized in the first 24 hours
D - died after 24 hours
E - euthanized after 24 hours
Reh - currently in rehab
R - released
PR - permanent resident
T - transferred
ESC - escaped
COA - client-owned animal



Once the desired search parameters are entered, press the **Search** button and the patient list will be filled appropriately.

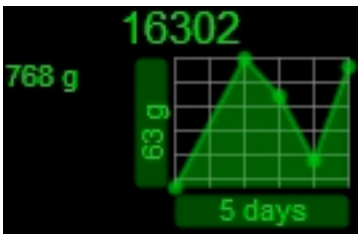
For day-to-day use, it is usually best to display patients of all species and status equal to **Reh or PR**. This will display all active patients.

The **Reload** button is used to refresh view from the database. This should be used if certain changes are made at another computer. For instance, if a new patient is added or moved to a new location on another computer, the data needs to be refreshed from the database before it will display properly.

The animal list

The animal list displays all animals that match the currently applied filter parameters described above. The list is sortable by clicking on each column. The id, species, location and various other important data fields are displayed for each animal. The **Special** column displays abbreviations for some of the more important check box attributes that can be selected for each animal. Specifically,

- **RWF** - Release where found
- **NOT RWF** - NOT release where found
- **FS** - Feed separately
- **NR** - Non-releasable
- **LPT** - Live prey test required
- **SWF** - Staff will feed
- **Gr** - Group of animals



*Shift-right click on a animal on the main screen to get a quick "Snapshot" that displays the weight profile as well as the last weight and date and any of the **Special** attributes listed to the left.*

Click **here** for more information on the check box attributes.

To access an animal record, simply double-click on it.

The following commands are available from by right-clicking on an entry in this list:

Note: if ALL species are being displayed, you can right-click on the Species column in either the Animal or Enclosure list to choose to display animals with their species abbreviation, common name or scientific name.

- **Add new record entry**
- **Edit animal info**
- **Show reminders** - All upcoming reminders will be displayed in a popup window.
- **Show emergency/capture doses** - This will display the pre-calculated doses for any emergency or capture drugs.
- **Paperwork** - **RaptorMed** can do all sorts of paperwork for you automatically. This includes sending various notifications to your US FWS agent or creating a non-releasability letter.
- **Maintenance**

  - **Delete this animal** - Although this should not need to be done often, this command allows you to remove a animal from the system. This is typically only needed if a animal was added accidentally.
  - **Clear this animal's treatment plan** - This is only needed if there is a problem with this animal's treatment plan that is causing the program to malfunction. This should rarely, if ever be needed.
  - **Unlock this animals's chart** - This allows a previously locked chart to be unlocked and therefore be edited again.
  - **Split group** - see Spitting Groups for more information.
- **Assign to team** (if **Teams** are enabled on your system)
- **Show species info page** - An informational page on the web will be displayed for this animals species. A specific page can be set for each species (See Species for more information) or if no page is set, the system will search Wikipedia for a matching page.
- **Cage cards and printouts** - There are several choices here to allow various patient cage cards and daily log sheets to be printed.
- **Goto location** - this will automatically scroll the Enclosure list to the location that currently contains this animal.
- **Add to favorites list** - See **Favorites**
- **Copy list to clipboard** - This will copy all the data displayed in the Animal list to the Windows clipboard so that it can be pasted into another application.

The enclosure filters

You can specify that only enclosures for a specific curator/aquarist or department (if enabled) can be displayed. The filter control area also has a **Goto** field that can be used to scroll the Enclosure list directly to a specific location. This is helpful in instances where you have many enclosure or enclosures with many animals. If enabled on your system. the **Goto** caption is actually a link that allows you to use the Enclosure/location chooser to quickly find a specific location.

The enclosure/location list

The enclosure\location list displays each enclosure or location. Each location has an expandable/collapsable list itemizing each animal in that location. You can access the enclosure's log or an animal's chart by double-clicking on the appropriate item in the list.

If you right-click on an ANIMAL, many of the commands listed above will be available. If you right-click on an ENCLOSURE, the following commands are available:

- **Record group treatment**
- **Enclosure log**
- **Show census** - Displays a small popup the summarizes that different species in the enclosure. This is particularly useful for aquariums.
- **Update census**
- Delete last group entry - Deletes the last entry made for each patient in the specified enclosure. This can be used in case a group entry was made incorrectly or accidentally.
- **Edit group treatment**
- **Show weight trends**
- **Add reminder**
- **Cleaning and watering** - This command allows you to record various cleaning/ maintenance actions for location/enclosure. This data is displayed on the Enclosure cleaning and maintenance report.
- **Record water quality** - This command is a shortcut to allow you to create a new **Water Quality** record without actually opening the Enclosure log first.
- **Record environmental conditions** - This command is a shortcut to allow you to create a new **Environmental Conditions** record without actually opening the Enclosure log first.
- **Edit cage/location properties**

General Workflow

1. Add a patient
2. Setup treatment plan
3. Print treatments sheets
4. Do your treatments
5. Record your treatments
6. And start all over again

- **Enclosure summary** - This report concisely summarizes all animals in the specified enclosure. For animals in rehab, it includes the id, band information, species, age, days in rehab, and whether the animal is marked as **Release Where Found**. It also includes a list of problems. For resident animals, the report is similar but somewhat more simple. This report can be printed and is handy when going to a specific enclosure to evaluate animals for release.
- **Group operations**
- **Assign to team** (if **Teams** are enabled on your system)
- **Habitat census report** (if enabled)

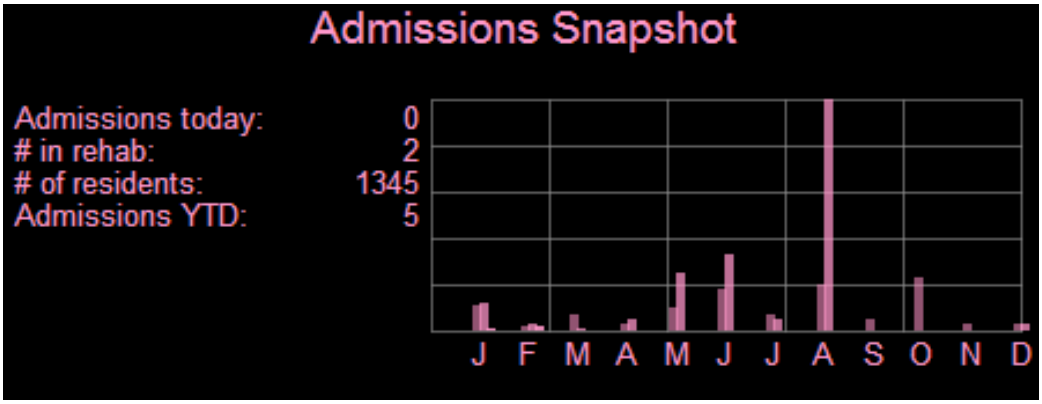
The Alert Window

This window will display all reminders of categories that the user has registered an interest in by "subscribing" in Alert Preferences. The alerts and reminders will be displayed with the most recent at the top. You can double-click on an entry to open the corresponding animal or enclosure log. You can right-click and choose **Delete reminder/alert** to remove the reminder.

The Summary Snapshot

Pressing **CTL-S** on the main screen will produce the Summary Snapshot screen. It shows admissions data and will graph monthly admissions for the last thee years. Each

month in the chart is composed of three shaded bars. The left-most represents 2 year



ago, the center one represents last year and the right-most bar is for the current year. Click outside the Snapshot scree to dismiss it.

Adding a new animal

To add a new patient, select **Edit ▶ Add new animal** from the main menu.

The **New animal** form has three tabs.

- Tab 1 - **Animal Information:** id, species, age, etc.
- Tab 2 - **Location Information:** where the animal was found, collected and/or transferred from.
- Tab 3 - **Collection Information:** how the animal was collected. This is important for zoos and aquariums that collect specimens from the wild. This tab may not be enabled on your system.
- Tab 4 - **Miscellaneous information:** a short history, any donation information, etc.

Animal Information

The next patient **Id** is automatically selected. Although possible, you should almost never have a need to change this id. You must choose a species from the list or press the **Lookup** link to use the **Species Lookup Tool**. This displays each species with it's abbreviation, common name, scientific name and species group. You can sort by any column by clicking on the column heading. Select a species and press the **Ok** button or simply double-click on one.

The other fields for **Date of Birth (DOB)**, **Age** and **Sex** are optional but should be filled out if known. The **Father** and **Mother** fields can be filled in the with id of any parents, if known.

Location information

Although many of these fields are optional, enter as much as possible as some of it may be required for various state and federal reports. There are fields to enter information about where and when the animal was found. In addition, you can enter information (the **Presented by/transferred from** fields) about where this animal may have been transferred from (i.e. another rehab organization). Information for either address (where found and presented by) can be retrieved from the **Address Book** by pressing the **Lookup from address book** links. You can save the information in the **Presented by/transferred from** fields as a new contact by pressing the **Add to address book** link.

If configured properly, the system will automatically fill in the county and zip code when you choose a city from the pre-filled list or when you manually type in a value. This applies to all forms that allow you to enter city as part of an address or location.

You can copy contact/address information from the **Where found** fields to/from the **Presented by** fields by pressing the **left** and **right arrow** buttons.

Click here for more information on the **Address Book**.

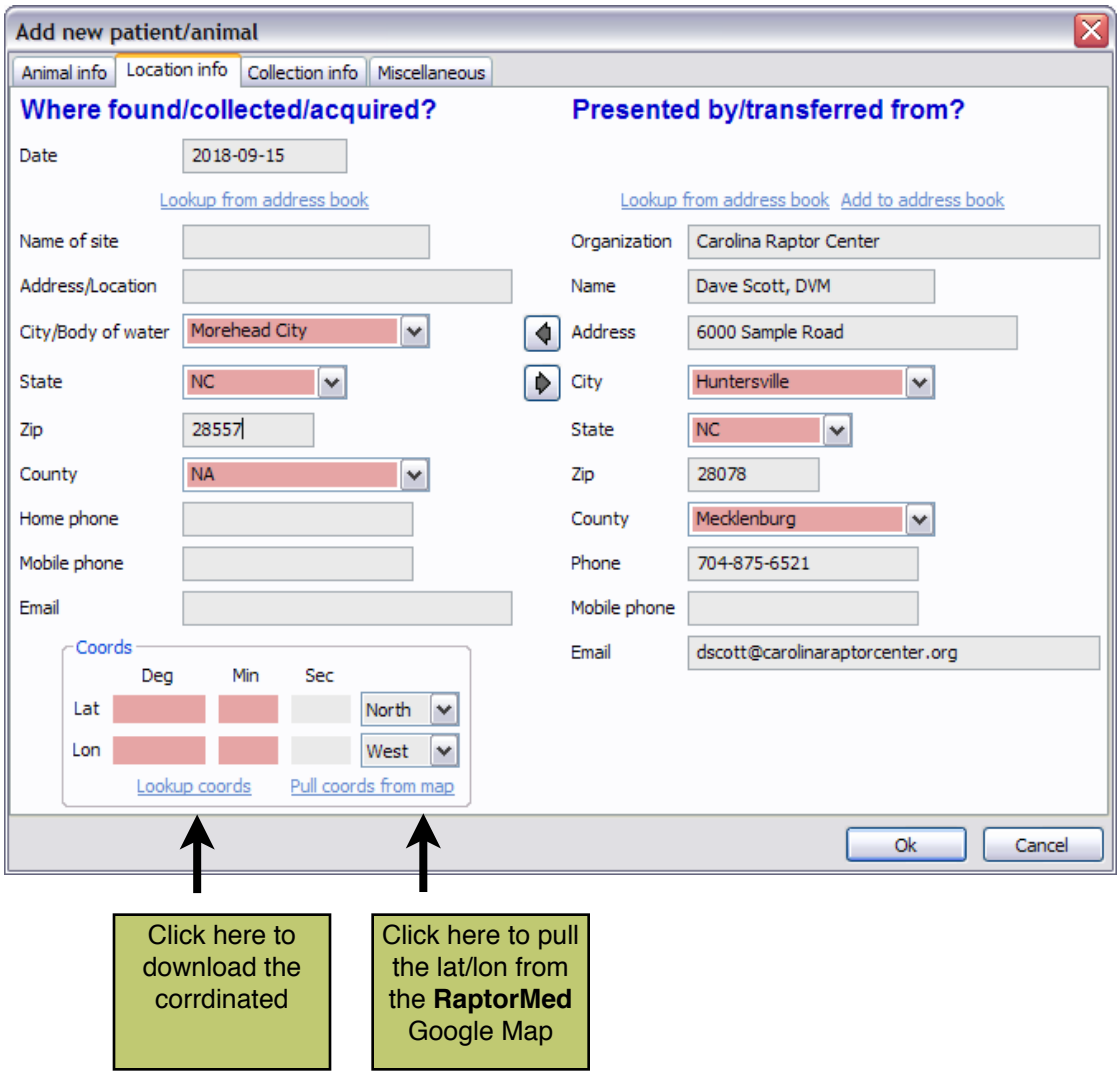
Latitude and Longitude entry

You can enter degrees, minutes and seconds separately in the three fields or you can enter degrees with a decimal point as in

45.334345

Entering latitude/longitude coordinates

You can specify the exact location for where the animal was found by manually entering the coordinates in the **Lat/Lon** fields. You can also pull the exact coordinates from the **RaptorMed Google Map**. To do this, load the Google Map into your browser. Find the location on the map and left-click on the location. Now, back in **RaptorMed**, press the **Pull coords from map** link and the coordinate fields will be filled in automatically for you. Click **here** for more information on the **RaptorMed Google Map**. If you have entered a valid and complete address, you can oftentimes download the coordinates by pressing the **Lookup coords** link.



If enabled, you can select an **oil spill event** that this animal is associated with. Once you select a spill, all the **Found Location** fields, including the latitude and longitude, will be automatically filled in. Spill events are tracked using the **Spill Manager**.

Collection information

If enabled on your system, this tab allows you to also record information about how the animal was collected. This is useful when collecting aquatic animals for an aquarium. There are fields specify details about the collection, the method used (i.e. dipnet, hook and line, etc) as well as the depth and water temperature.

Miscellaneous information

Additional information that can be entered in this section includes a short history, the **cause of injury** and the **initials/name** of the person admitting the animal. The actual time of day that the patient was admitted is automatically stored and is displayed in the **Patient Info** window.

Record information about any **donations** including the amount, type (check, credit card, cash) and details such as the check or credit card number. The data in this field is **NOT** encrypted so you should not record the ***entire*** credit card number here.

The **Release where found** check box can be selected to indicate that this patient is supposed to be released where it was found or if the finders indicated interest in being involved with the release.

When the **Ok** button is pressed, the new patient is added.

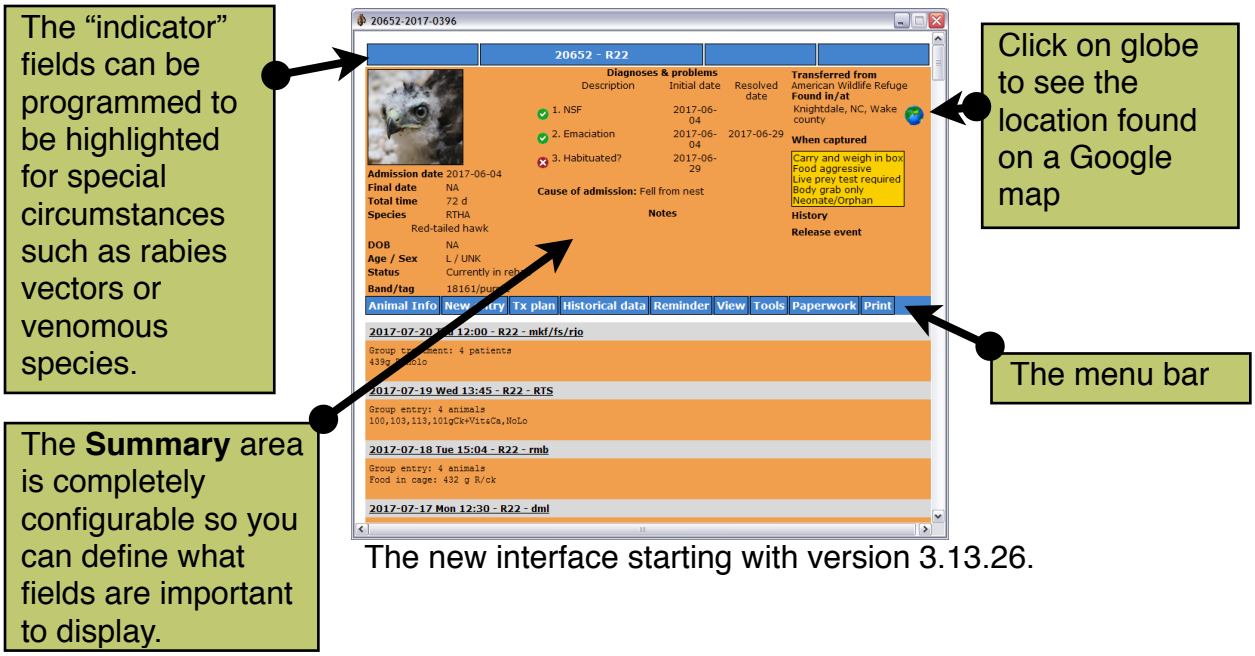
At this point, the patient is in the system, but the following needs to be done in order to complete the entry:

- The physical exam findings and problem list **should** be entered.
- The patient's location/enclosure **must** be specified.
- The treatment plan **must** be specified.

All live animals must have a valid location and treatment/feeding plan specified.

Viewing an animal's chart

The animal's chart is accessible by double-clicking on the animal in either the animal list or the enclosure/cage list. The user can create and apply attractive **color schemes**, to control how this screen appears.



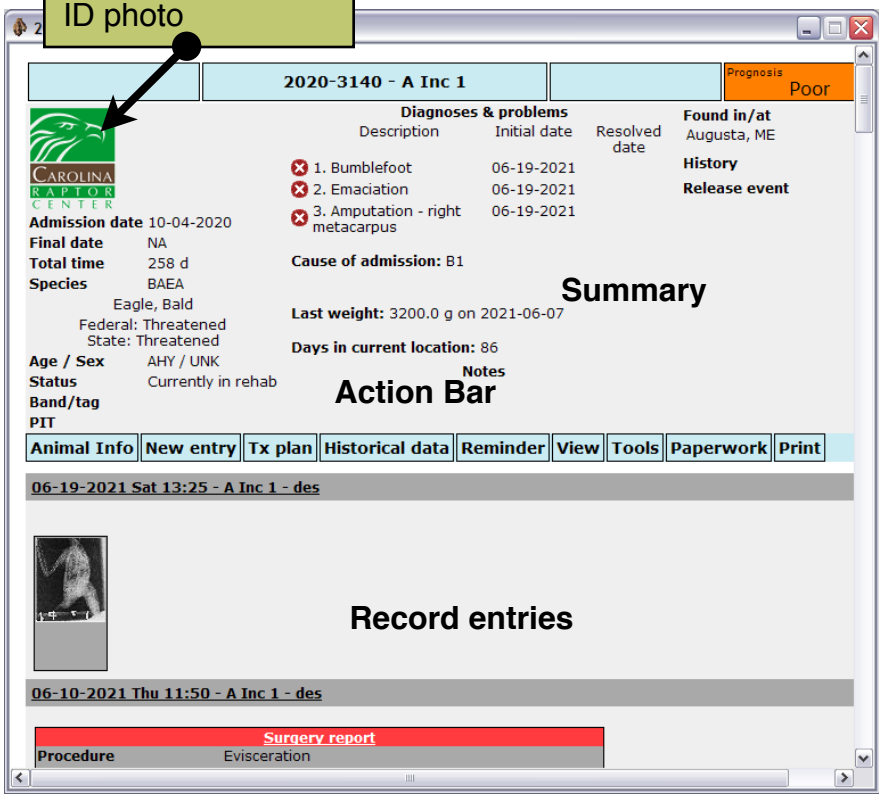
The new interface starting with version 3.13.26.

An animal's chart is divided into three main sections.

- The **Animal Summary** - This section displays a animal overview and includes things such as the admission date, species, the age, and the time (in days or years) in rehab or residence. It also shows the problem list, where the patient was found and any other special notes.
- The **Action/Menu Bar** - In the older interface, this section has a series of links to various functions that allow you to edit the patient's information or treatments as well as manage the problem list, add reminders and also to add new record entries. In the new interface, the is a traditional menu bar.
- The **Medical Record Entries** - This section has each record entry listed with the most recent at the top. Each entry includes the date and time it was made, the initials of the person making the entry as well as the patient's location when the entry was made. There is a **Print** link that allows you to print a single entry. Each entry also displays the patient's weight, body condition score and food leftovers if specified, in addition to the actual text of the entry. The system can be configured to show only the most recent entries. For example, it may only display the last 12 months of entries by default. To see the entire set of entries if they are not already displayed, scroll to the bottom of the

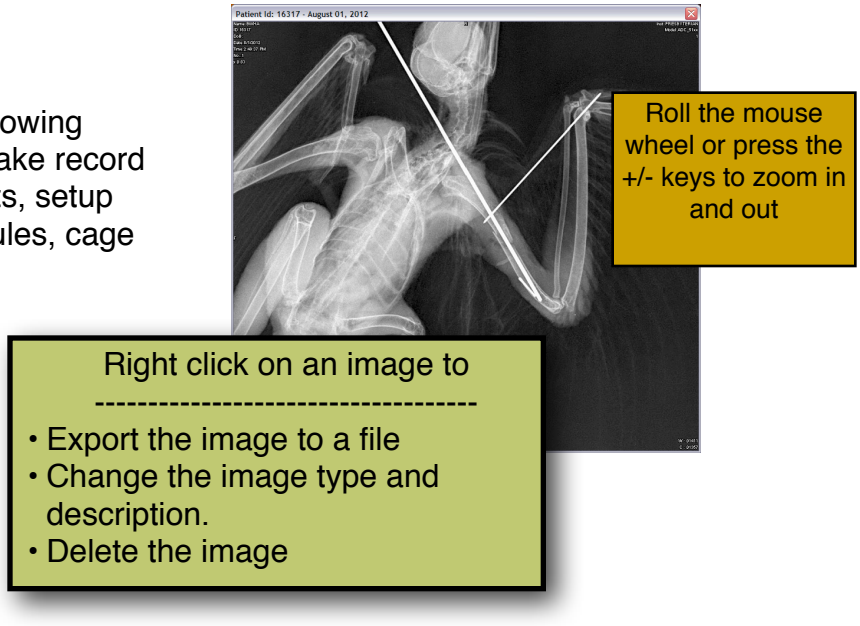
chart and press the **Display entire record** link.

- Any attachments such as image files or other documents, as well as any lab results are embedded directly in the entry. To view an image or any other attachment, just single-click on it. If it is an image file, it will be opened in a separate viewer window. If it is another type of file such as a Word document, it will be opened in the appropriate application, assuming the application is installed on the computer.



The Action Bar

The **Action Bar** has the following choices that allow you to make record entries, view data and charts, setup treatments and print schedules, cage cards, etc.



Animal info
This function allows the Animal's basic information to be modified. Click here for more information.

New entry
This function allows you to add a new entry to the medical record. Click here for more information.

Tx plan
This function allows you to setup this animals individual treatment/feeding plan plan. Click here for more information.

Historical data
This function allows you to view and graph many types of data including imagery, weight profiles and laboratory test results. Click here for more information.

Reminder
This function allows you to create a new reminder for this animal. Click here for more information.

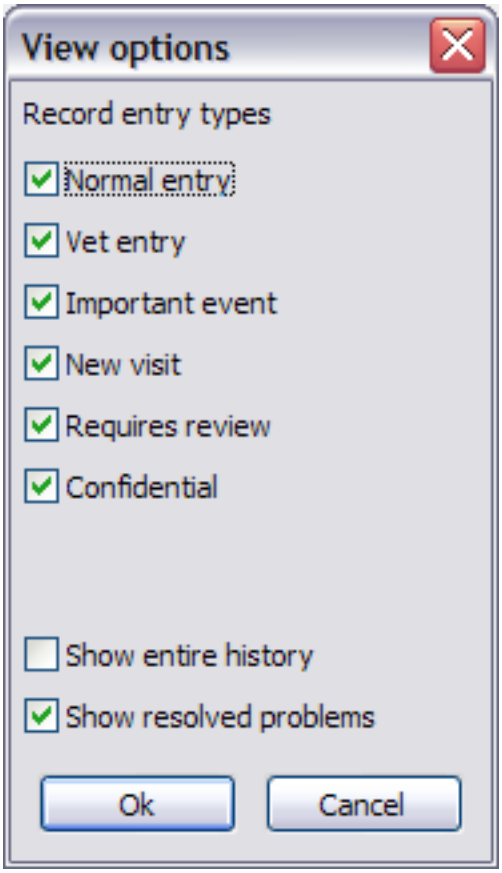
View

Problems
This function allows you to manage a patient's problem list. Problems can be added and removed. An initial date and end date can be specified and each problem can be marked as pending or resolved. Click here for more information.

Where from
View/edit the information about where this animal found or collected. A form similar to the **New animal form** will appear with fields for entering information about where the animal was found and/or about where it may have been transferred from.

Reminders
This function allows you to view all existing reminders for this patient. Click here for more information.

Options
This allows you to choose various display options including which **types** of record entries to display, whether to show resolved problems or just the unresolved ones and to display the entire medical record or just the most recent entries.



Attributes
This allows you to display and add/ edit **attributes** for this patient. Typically attributes are automatically generated for various purposes so it would be rare to have to edit them here.

Summary
The function allows for a overview or summary to be recorded. This is a quick place to become familiar with familiar with a animal's history. Of course, this summary is only as good as how well it is kept up-to-date. This summary may also be printed on some reports, depending on your configuration.

Samples
This function allows you to view all samples stored for this patient. Click here for more information.

Special entries
This function will list all the record entries that are **not Normal** entries. These typically include **Important events** or **Veterinary** entries. For some clients, this function will list all entries that are marked as **New visits**. You can double-click on any entry in the list to go directly to that entry.

Vaccine history

Tools

Call log
This function keeps track of phone calls with members of the public after an animal has been admitted. Click **here** for more information.

Cost estimator
This function creates a estimate summarizing the cost of care that this patient has received. Click **here** for more information.

Export
This function allows you to export an animal's record. All lab results are exported automatically. Images and other attachments can also be optionally exported. Movies can also be exported, however this is generally not recommended as the files can be quite large.

The export can use one of two formats:

- HTML - this produces a web page that can be viewed or emailed.
- XML - this produces a file that can be later loaded into another RaptorMed database. This is very useful when transferring an animal to another facility. See the Import animal record command for more information.

You will be prompted to select a location on the computer into which to save the export.

- If you elected to export the images/attachments then a folder named after the animal's Id will be created in the specified location and the medical record and all attachments will be copied there.
- If you elected to **not** export the images/attachments, then a single file will be created in the location specified.

Program log
This function allows you to record and track program usage for an animal.

Genealogy
This function opens the **Genealogy tracker**.

Egg tracker
This function opens the **Egg tracker**.

Choose mate
This function allows you to choose an animal's mate and is useful for recording reproductive date and genealogy. See **Selecting a mate** for more information.

Donations
This function opens the **Donation tracker.**

Search
This function allows you to search for any word or phrase in the entire chart. After entering the search text, any matching text will be highlighted and visible as you scroll down in the chart. There are **Find/Next** buttons that you can press to advance to the next occurrence of the search text.

Env conditions - Record
This allows you to record an new **environmental conditions** record for the enclosure that contains this animal.

Env conditions - View
This allows you to view all the **environmental conditions** data for the enclosure that contains this animal.

Water quality - Record
This allows you to record an new **water quality** record for the enclosure that contains this animal.

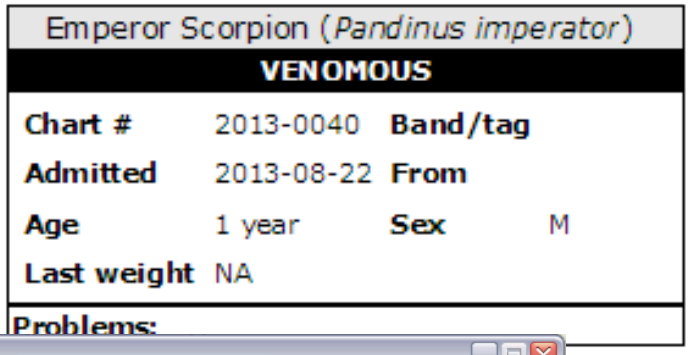
Water quality - View
This allows you to view all the **water quality** data for the enclosure that contains this animal.

Paperwork
These functions are discussed **here**.

Print

Admissions receipt
This prints a receipt based on a pre-defined template that prints the finder contact info and patient summary information.

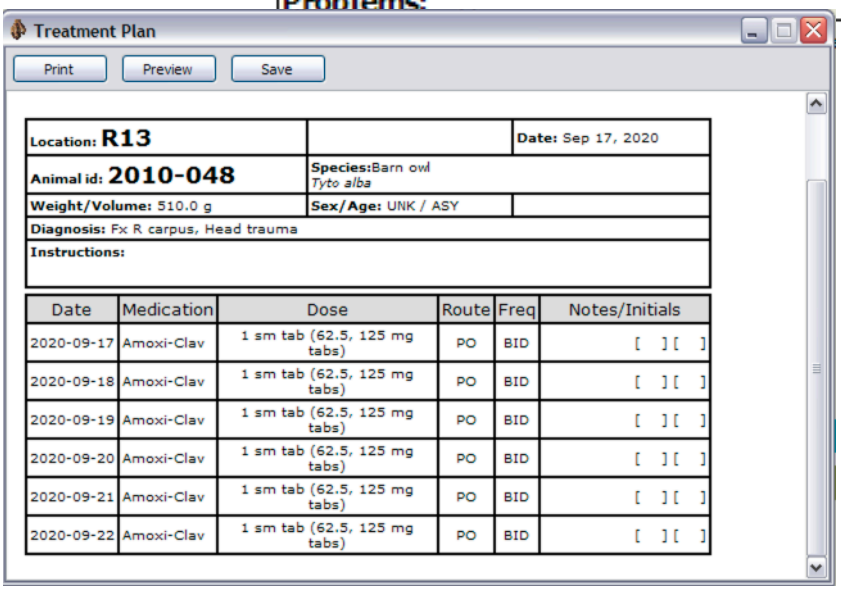
Cage card
This function allows you print a card suitable for hanging on the animal's kennel or enclosure. The format, layout


Emperor Scorpion (*Pandinus imperator*)

VENOMOUS

Chart #	2013-0040	**Band/tag**	
Admitted	2013-08-22	**From**	
Age	1 year	**Sex**	M
Last weight	NA		

Problems:


Treatment Plan

Print | Preview | Save

Location: R13		**Date:** Sep 17, 2020
Animal id: 2010-048	**Species:** Barn owl *Tyto alba*	
Weight/Volume: 510.0 g	**Sex/Age:** UNK / ASY	
Diagnosis: Fx R carpus, Head trauma		
Instructions:		

Date	Medication	Dose	Route	Freq	Notes/Initials
2020-09-17	Amoxi-Clav	1 sm tab (62.5, 125 mg tabs)	PO	BID	[ ][ ]
2020-09-18	Amoxi-Clav	1 sm tab (62.5, 125 mg tabs)	PO	BID	[ ][ ]
2020-09-19	Amoxi-Clav	1 sm tab (62.5, 125 mg tabs)	PO	BID	[ ][ ]
2020-09-20	Amoxi-Clav	1 sm tab (62.5, 125 mg tabs)	PO	BID	[ ][ ]
2020-09-21	Amoxi-Clav	1 sm tab (62.5, 125 mg tabs)	PO	BID	[ ][ ]
2020-09-22	Amoxi-Clav	1 sm tab (62.5, 125 mg tabs)	PO	BID	[ ][ ]

and information that is printed on the cage card is completely customizable. Contact customer support for assistance.

Cage sheet
This function prints a full-page cage sheet which has space for multiple daily entries. This function is deprecated and will be replaced with the Daily care log printout.

Daily care log
This is very similar to the Cage Sheet but this printout is customizable. This will replace the Cage Sheet printout.

Entire record
This command will print the entire patient record just as displayed. Note that these printouts can be very long so you may want to use the **Tools ▶ Export** function to export it electronically instead.

Invoice
This function allows you to generate an invoice for client-owned animals. You will be prompted for a date range and all procedures recorded in the Procedure log will be tallied to generate the invoice.

Treatment plan
This function allows you to print the animals's treatment plan. You will be prompted for a start date and for a number of days into the future.

Enrichment schedule
Prints the enrichment calendar. All enrichment activities scheduled in the animal's treatment plan as well as any reminders of category **`Enrichment`** will appear on this report.

Enrichment schedule for Betsy

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	**26** AM Visual - Mirror Auditory - Chimes	**27**	**28** AM Physical - Kong	**Mar 1**	**2** AM Visual - Mirror Auditory - Chimes	**3**
4	**5** AM Visual - Mirror Auditory - Chimes	**6** Try playing music	**7** AM Physical - Kong	**8**	**9** AM Visual - Mirror Auditory - Chimes	**10**
11	**12** AM Visual - Mirror Auditory - Chimes	**13**	**14** AM Physical - Kong	**15**	**16** AM Visual - Mirror Auditory - Chimes	**17**
18	**19** AM Visual - Mirror Auditory - Chimes	**20**	**21** AM Physical - Kong	**22**	**23** AM Visual - Mirror Auditory - Chimes	**24**

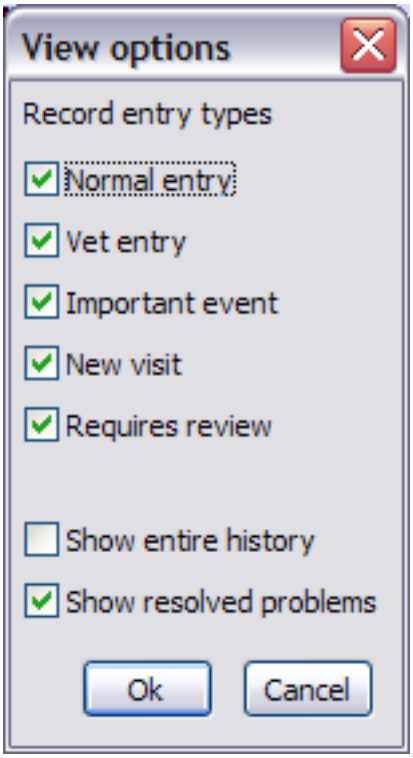
Print Rx
This function, if enabled, this will print a prescription sheet for the specified patient. Only prescriptions that have an Until date in the future will be printed.

Print Lab Request
This function, if enabled, this will print a lab test request form for the specified patient.

Upcoming stuff
This prints a calendar that shows all upcoming reminders and special treatments for the specified patient.

View options

This function allows you to filter which type entries are viewed. For instance, you can view only the **Veterinary** entries or only the **Important events**.



- **Normal entries** are for everyday records.
- **Vet entries** are typically used by veterinary staff to record important medical information.
- **Important events** are used to record information about important events.
- **New visits** are used in clinical situations for a new patient visit. These are typically used for client-owned animals that live offsite with an owner or caretaker are visiting the clinic for an appointment.
- **Requires review** is for an entry that is made that requires review and approval before the entry is considered finalized. RaptorMed allows for user logins that can only make entries that require review and also user logins that have the ability to review and approve entries made by other users. See **User Manager** for more information.
- **Confidential** is for entries that contain confidential information like names and phone numbers. These entries can only be viewed internally and they are never displayed on the web page.
- **User-defined entry types** - The system also allows for entry types that are user defined. Please contact customer service for more information.

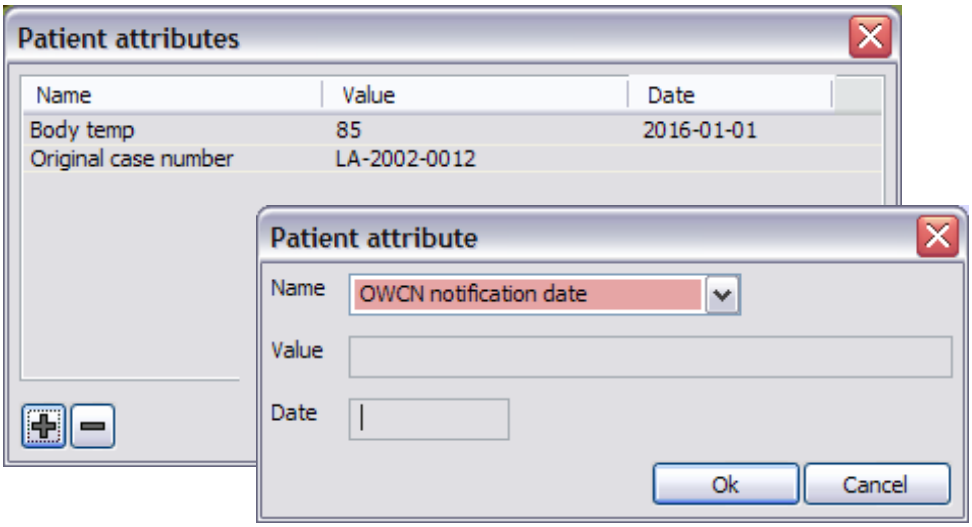
You can also choose how many entries are viewed. By default, the system will only view the last 12 months of entries. This default value can be set to any number of months or it can be overridden completely by checking **Show entire history**. The **Show resolved problems** option will display all problems whether they are resolved or not.

Attributes

Any number of random attributes can be stored for an animal. An attribute can be a name/value pair or simply just a keyword. Each attribute can have an optional date associated with it. Some attributes are automatically generated by the system to track certain events or conditions but you are free to add any number of attributes to track any type of data. These attributes can then be searched or queried later when attempting to mine your data. Some examples of attributes are:

Name	Value	Date
OWCN notification date		2016-03-02
Voriconazole trial		
Body temp	85	2016-01-01
Body temp	86	2016-01-02

To display an animal's attributes, press the **Attributes** link in the **Action Bar**.



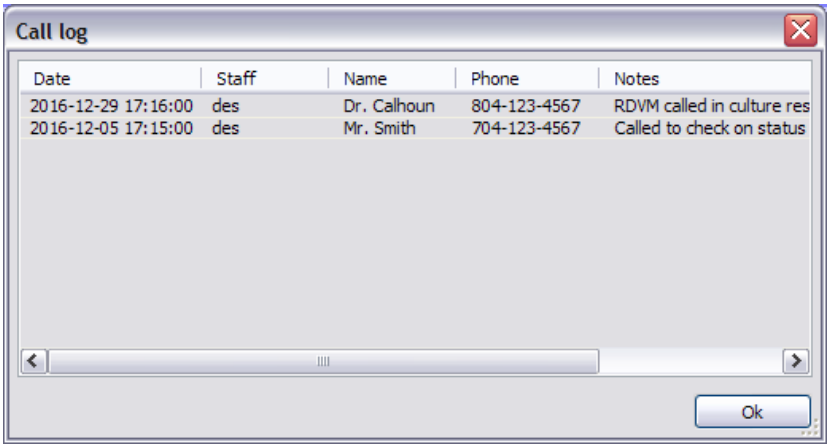
You can press the **+** to add an attribute, press the **-** to delete the selected attribute, or double-click on an attribute to edit an existing attribute. The **Attribute editor** dialog allows you to choose a **Name** from the pre-filled list or enter a new name. The **Value** and **Date** are optional and depends on the type of data you are trying to store.

Vaccine History

This function allows you to view this animal's vaccine history. It displays the vaccine given, the date, the form/manufacturer, the volume and the route of administration. You can sort the list by clicking in any column heading. This data is created by using the Vaccine link in the Medical Record Entry form.

Post-admission Call Log

This function allows you to view a list of all phone calls made regarding this animal. Call log entries are made using the optional Call Log data entry form template. This form template allows you to enter information about the call such as the name and phone number of the person spoken to as well as some notes about that call. Note that these calls occur once the animal is ***already admitted*** and should not be confused with the **Pre-admission call log** function.



Changing an animal's basic information

Basic patient information such as species, sex, age, etc. can be viewed and changed by clicking on the **Animal info** link in the **Action Bar** on the animal's chart. The most common changes made involve the animal's location and status (i.e. In Rehab, Released, Died, etc).

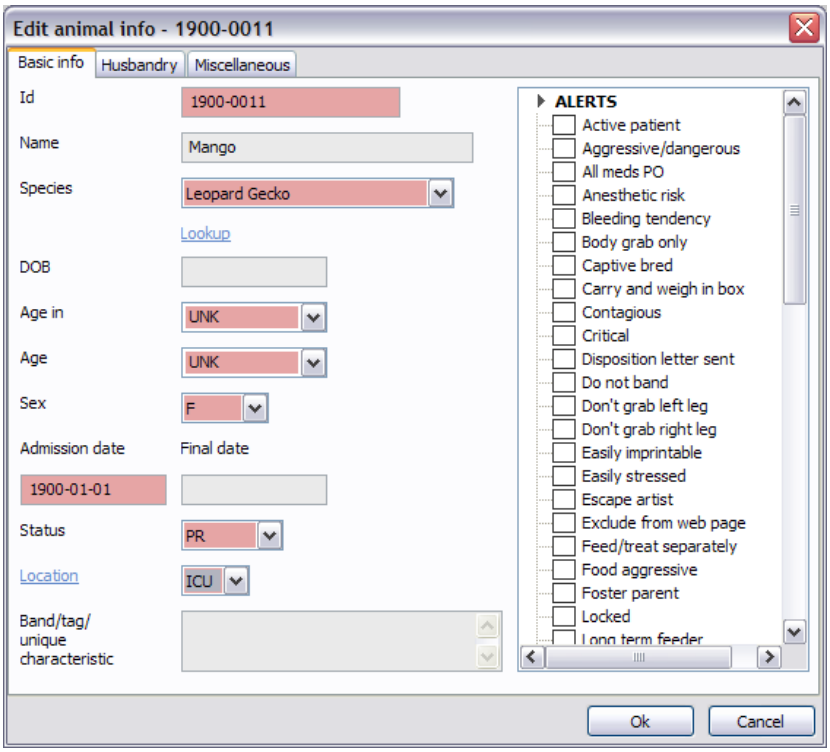
The **Animal Info** form has three tabs: **Basic info**, **Husbandry**, and **Miscellaneous**,

The **Basic Info** tab has the following fields:

- **Id** - This number is automatically assigned by the system and should rarely or never need to be changed.

- **Name** - This field is primarily used for resident animals that may have a name.

- **Species** - The species is indicated by an abbreviation. For birds, the 4-letter abbreviations specified by the USGS Bird Banding Lab (BBL) are typically used, although, this is not absolutely required. For non-avian patients, you can used any scheme that works for you. Many facilities use the genus/species as the basis of the abbreviation. For example, the opossum is *Didelphis virginiana* and its abbreviation could be **DIVI**. Another option is to create easily recognized abbreviations for a species so the opossum could be **OPOS**. Any abbreviation can be used as long as two species do not have the same abbreviation. The species abbreviations are defined in the **Species Editor**.



- **DOB** - If an actual date of birth/hatch is known, it can be entered here. In this case the actual age in years will be calculated and displayed.

- **Age In** - The age on admission.
- **Age** - The current age. This age should be updated as necessary. For example, all birds traditionally gain a year of age on Jan 1.
- **Sex** - Male (M), Female (F), Male Castrated (MC), Female Spayed (FS) or Unknown (UNK).
- **Admission date** - The date of admission
- **Final date** - The date when the patient is finalized (i.e. release, died, euthanized, etc.).
- **Status** - The current patient status. The basic choices are described in in this table. There may be additional status codes that are specific to your installation.

Status	Description
DOA	dead on arrival
EOA	euthanized on arrival
D24	died within 24 hours
E24	euthanized within 24 hours
D	died after 24 hours
E	euthanized after 24 hours
I	Inactive - used when an animal is merged into a group
Reh	currently in rehab
R	released
PR	currently a permanent resident
T	transferred
ESC	escaped
COA	client-owned animal such as a falconry bird

- **Location** - The patient's current location. It is very important that this be kept up-to-date.

- **Band/color/unique characteristic** - Any characteristics that uniquely identify this patient. This is useful to tell this animal apart when in a group. It can be an ID band number, an ear tag number, an ink pen color mark, or even an unique behavioral trait. When the animal is in a rehabilitation setting, this can be a temporary band or marker. This field is also used for a permanent marker when and if an animal is released.

- **Auxiliary marker** - USGS auxiliary markers are recorded in this field. Click **here** for more information.

- There is also an area with many check boxes. Click **here** for more information.

The **Husbandry** tab has the following fields:

- **Summer/year-round weight** - The ideal weight (in grams) for this patient. This value is used for the summer or year-round if a winter weight is not also specified.

- **Winter weight** - The ideal weight (in grams) during the winter months.

- **Husbandry notes** - Any unique husbandry related notes for this animal.

- **Away from/to** - Dates during which this patient will be away from the facility. This is primarily used for resident animals that are out on programs. In these cases, feeding instructions for these patients will not be printed out on the daily treatment sheets. These dates are ignored unless the **Away/offsite** checkbox is checked (see below).

- **Training level** - Used for resident animals that are trained or worked by handlers. Each animal can be assigned a training level. This setting is used in the **Handler Training Log** which allows you to keep track of which handlers have been trained with which animals. The training level labels are configurable and there can be up to 10 different values. By default, there are five values that range from **Beginner** to **Master**. If you leave this field blank, then this animal will **not** be included in the **Handler training** function.

- The **Certified handlers** field will display which people are certified to work this animal. This is a read-only list. See **Handler training log** for more information.

The **Miscellaneous** tab has the following fields:

- **Morph/breed** - Any color morphology or subspecies information. This is useful for species such as screech owls that have different feather colors or for animals that have multiple breeds or variations.

- **Microchip/PIT tag** - Microchip/PIT tag numbers can be recorded here.

- **Expected release date** - The date you expect this patient to be ready for release. This is used in the **Event Planner** to plan release events.

- **Team** - The team that this patient is assigned to. This feature may not be enabled on your system.

- **Keywords and attributes** - Each animal can have keywords assigned to them for easy retrieval at a later date. For example, a patient that is part of specific treatment trial can be tagged with a special keyword. You can enter any random text or press the **+** button and choose from a pre-defined list of keywords. Any number of keywords can be added and should be separated with commas. A quick search for patients based on many characteristics including keyword can be quickly performed using the **Advanced Search Tool**. In addition, you can click on the **Attributes** link to manage the **Attributes** for this animal. Click **here** for more information on attributes.

- **Notes** - This field is used to store any information that you want to keep readily available. This information is displayed at the top of the patient's record in the **Summary** area and printed on the daily treatment sheets.

- **Alert** - This field allows you to display a highlighted banner at the top of the animal's chart.

- **Release event** - You can use this field to store information about an upcoming release event that this animal is scheduled for. You can manually enter information here but this field is typically filled in automatically by the **Event Planner**.

- **Age and sex-related characteristics** - This field can store information about any characteristics that help identify the age or sex of this patient. For example, "adult plumage, dark brown iris" might be entered for an adult hawk. This information is displayed later when creating a **Release/Banding Record** as it helps fill the age and sex fields on that form correctly.

- **Prognosis** - You can specify a color-coded prognosis from **grave** to **excellent**, or unknown. The prognosis can be displayed in various places in the program.

The check boxes

There are also a whole list of check box choices that can be made. When checked, a short description of each is displayed at the top of the patient's record in the **Summary** area and printed on the daily treatment sheets. The options are summarized in the following table. The entries marked with an * are for informational purposes only and do not affect the behavior of the program. Note that the check boxes are arranged in a few groups such as **Alerts**, **Resident animals, etc**. These groupings are merely

organizational and are for clarity. They do **not** indicate that only resident animals, for example, can use the check boxes in the **Resident animal** section. At the bottom of the list, there is a section for **User-defined** checkboxes and you can configure the system to include additional check boxes that may be of use in your situation. Contact customer support to assist in setting these up.

name	description
Active patient	This checkbox can be used to indicate if this is an active patient and not one that is in the final stages of rehab. This checkbox can be used in the **Active patients report** (**Reports ▶ Active patients**) and in the active/ inactive patient filter on the main window.
Aggressive/dangerous*	Used for animals that are aggressive or dangerous.
All meds PO	Used for animals that are not yet self-feeding. Used to ensure that all meds are given manually. Animals with this option selected will automatically be marked as a **GRABBER** on the daily treatment sheets.
Anesthetic risk*	This animal has had anesthesia problems in the past.
Away/offsite	This animal is away or offsite. If checked, the **Away From/To** dates are used to determine if an entry for this patient should be printed out on the daily treatment sheets.
Band return	This animal has had a band report after release. It will appear on the **Band reports report**. These animals typically will have a **Band Report** record attached to there chart.
Bleeding tendency*	The animal has had a bleeding tendency on previous blood collections.
Body grab only*	This animal should not be grabbed by the legs. Typically used for long-legged avian species or a patient that should not be grabbed by the legs.
Captive bred	This animal was captive bred. This is used to exclude animals from various reports including the USFWS rehabilitation report.
Carry and weigh in box*	This animal should be carried and weighed in a box. Typically used for young patients/orphans that are delicate and should be handled as little as possible.
Cold-intolerant	This animal is cold-intolerant. It will appear on the **Cold-intolerant patients report**.
Contagious*	This animal is potentially contagious.
Critical*	This animal is critical.
Disposition letter sent	Used to indicate that a disposition/status update letter has been sent to the finder.

name	description
Do not band*	This animal has had issues with id bands on its ankle in the past. This is a reminder to **not** replace a band while in rehab or prior to release.
Do NOT release where found	This animal should **NOT** be released where found. This is typically for cases where the animal was injured intentionally (i.e. gunshot). This flag will be set automatically when you select one the illegal causes of injury (click **here** for more information).
Does NOT need live prey test	This animal does not need a live prey test prior to release. This can be used for animals (i.e raptors) with eye damage. Typically, many of these would need vision and/or live prey testing before release. This option can be used for those animals that have eye damage but are deemed fit for release without further testing. These animals will **not** be shown on the **Patients that need live prey test report**.
Don't grab left leg*	This animal has an injury to the left leg.
Don't grab right leg*	This animal has an injury to the right leg.
Easily imprintable*	This animal is easily imprintable. Useful for young vultures or any other easily imprintable species.
Easily stressed*	This animal is easily stressed.
Escape artist*	This animal has a tendency to escape so be careful when entering its enclosure.
Exclude from web page	This animal's chart should not be displayed on the **RaptorMed** web page.
Feed/treat separately	This option is used to indicate animals in a group are to be treated/fed separately. Typically, animals that are housed individually are treated individually using their individual treatment plan. Likewise, animals in a group are treated as a group and use a Group Treatment. By checking this box, this behavior can be overridden such that all animalw in a group will use their individual treatment plans. This is useful when there are animals that are housed in a group but require individual treatments. Note: the actual effect of this check box depends on your configuration. In some cases, this check box is ignored and in others cases, it is only recognized if ALL patients in a specific location have the check box checked.
Finder present at release	This indicates that the finder would like to be present at the release.
Food aggressive*	This animal is food aggressive and can be dangerous when feeding.
Foster parent	This animal is used as a foster parent. This checkbox can be used in various reports.

name	description
Geriatric*	This is an old animal. This distinction is subjective and depends on the individual and the species.
Group of animals	This animal is not an individual. It represents a group like a school of fish or a collection of insects. See Group animals for more information.
Has placement	This animal is non-releaseable but permanent placement has been found. These animals will **not** be shown on the **Patients that need placement report**.
In rehab	This is used to indicate that a resident animal is sick or injured and should be temporarily treated by the rehab hospital staff. This may affect where this animal is printed on the daily treatment sheets and this is highly dependent on how your installation was configured.
Locked	This animal's chart has been locked and cannot be edited.
Long term feeder	For internal use only
Needs cope	This bird needs to have its beak coped. It will appear on the **Cope report**.
Needs falconer eval	This raptor needs a falconer evaluation prior to release. These animals will be shown on the **Falconer eval waiting list report**. This is typically used for species such as peregrine falcons that may require special flight training prior to release.
Needs imp	This bird needs to have its feathers imped and it will appear on the **Imp report**.
Needs live prey test	This animal needs a live prey test prior to release. It will be shown on the **Patients that need live prey test report**.
Needs molt chamber*	This bird's feathers a damaged badly and cannot be imped. Checking this option puts in on the waiting list for a molt-chamber, if available.
Needs ophtho consult	This animal needs a ophthalmogist's evaluation prior to release. These animals will be shown on the **Ophtho consult waiting list report**.
Neonate/orphan	This animal is a neonate/orphan. Depending on how your system was configured, this may be used to determine where this animal prints on the daily treatment sheets. This setting is also used to include animals on the Orphans ready for transfer report.
Non-native	This animal is not a native species. This setting can be automatically configured for each species using the **Species Editor**. These patients are typically ignored when generating year-end report for each state and for the USFWS.

name	description
No water*	This animal should not be given water for some reason such as a foot bandage.
NR	This animal is non-releasable and permanent placement has not been found. These animals will be shown on the **Patients that need placement report**.
NR on arrival	This animal was non-releasable on arrival. Typically this option is selected along with the **NR** option. If selected, this animal will be excluded from any release rate calculations made by **RaptorMed**. This option is used for animals that are clearly non-releasable on arrival but are either unique or rare and are worth keeping for placement.
Program animal	This animal is used for educational programs. Animals with this check box selected can have program usage records recorded using the Group Program Log function.
Quarantine*	This animal is under quarantine. If configured on your system, this flag can be automatically set for all new admissions. In addition, when this flag is auto-set, a reminder will be automatically created to alert you when the quarantine period is over.
Release approved*	This animal has been approved for release. This may also be referred to as **Transfer approved** when the animals are orphans that have been approved for transfer to another facility to complete the rehab process.
Release where found*	This animal should be released where it was found. This may be because the finder/public requested it be returned when ready for release.
Resident	This is a resident animal. When PR is chosen for the animal's status, this checkbox is automatically checked. This seems redundant but this keeps the animal's status as a past resident when and if the animal's status is changed (for example if it dies or is transferred).
Staff will feed	These animals are to be fed by special staff and will appear on a special "Staff will feed" treatment sheet. This option may not be used in your configuration.
Temporary*	This is a temporary patient.
Treated with chemotheapeutics	This animal has been treated with a chemical that makes it non-releasable. This is typically used for fish in an aquarium setting. These animals will appear on the Chemotherapeutic exposure report.
Undergoing PT	This animal is currently undergoing physical therapy. Selecting this option will place this animal on the **Physical Therapy Report**.
Waiting for molt*	This bird's feathers are damaged badly and cannot be imped. It will likely be a long-term patient while it waits to molt new feathers.

name	description
180 days reported	This animal has been in rehab over 180 days and this status has been reported to appropriate authorities. This checkbox can be checked manually but it is also set automatically by the Greater than 180 days report.

Chapter 2

Making record entries
Entering lab results, procedure reports and examinations
Tracking the patient's problem list

Making medical record entries

Medical record entries can be made for an individual animal, for all animals in the same enclosure (click here), or for multiple enclosures all at once (click here). Which method you use depends on whether the patient is being treated individually or as part of a group.

RaptorMed uses a 24 hour clock so 1 PM is 1300. Times can be entered with or without a colon separating the hours and minutes.

Individual entries

Medical record entries can be a combination of hand-typed, text, text that is automatically inserted by the system, images, and results of lab tests or examinations. This function is accessed by clicking on the **New entry** link in the **Action Bar** on the patient's chart.

The weight and body condition score (BCS) are entered at the top. Both fields are optional. The weights can also be entered in alternate units. To enter a weight in kilograms, append a "**k**" or "**kg**" after the weight value as in "**1.2k**". You can also specify weights in ounces (use **oz**) and pounds (use **lb**). If enabled, the user can choose the units of weight from a list.

The weight can also be entered as **total weight - a tare weight**. So if an animal is weighed in a box that weighs 500 grams and the combined weight is 1300 grams, you could enter "1300-500" in the **Weight** field and **RaptorMed** will do the math for you.

The initials of the person making the entry, the date and time, are required fields. Note that the date and time fields are filled in with the present date and time so you may need to change these if you are making an entry for something that happened early that day or on an entirely different day altogether.

The input format for all date fields is either `yyyy-mm-dd or mm-dd-yyyy`. You can separate the year, month and day with either a - or a /. For example, July 12, 2012 would be

`2012-07-12 or 07/12/2012`

If you just enter a 4-digit year, then it will assume Jan 1 of that year.

You can also enter relative dates such as

`+1d`
`+5week`
`-1m`
`+3year`

You can use a plus or minus sign and the specified number of days, weeks, months or years will be added or subtracted from today.

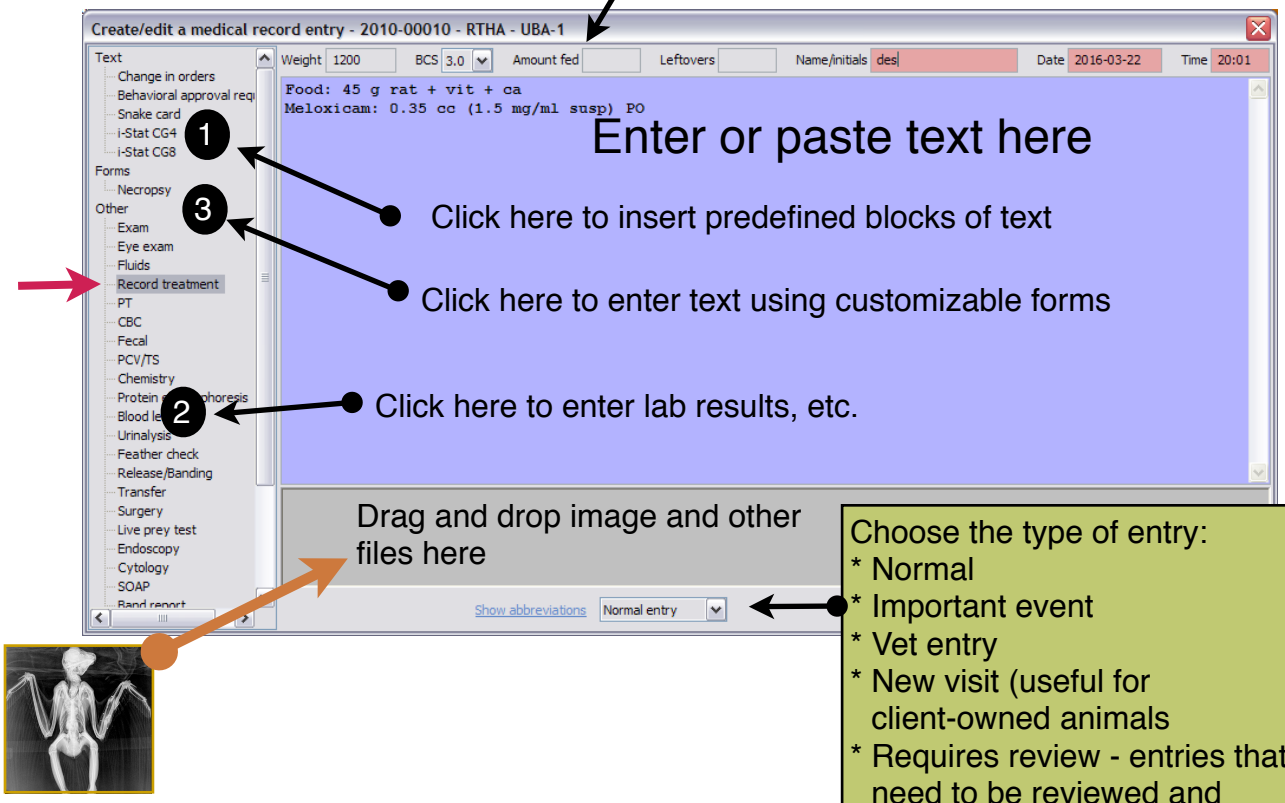
Finally, you can always double-click in any date field to bring up a calendar date picker.

If enabled, there may also be fields to enter the **Amount fed** and the **Leftovers**. Using these entries allows for food intake and leftovers to be graphed in the Historical Data Viewer. As with the weight field, you can make entries in any unit the appending the appropriate unit abbreviation (k, kg, oz, lb).

You can enter any amount of text in the main text area or you can cut and paste text in from any other application.

Double-clicking on any of the entries in **Area 1** will automatically insert a predefined block of text. These are referred to as “Text templates” and they are useful to quickly enter text that is used repeatedly. The list of choices in this area is configurable and can be changed at any time. See the Text template editor for more information.

Enter weight, body condition score, amount fed, and leftovers here



Choose the type of entry:

* Normal
* Important event
* Vet entry
* New visit (useful for client-owned animals
* Requires review - entries that need to be reviewed and approved before becoming finalized.
* Confidential - entries can only be viewed internally and are never displayed on the web page. Useful for storing confidential information.

You can have **RaptorMed** alert you if a newly added weight varies by a specified percentage from the previous weight or if the new weight is outside an “ideal” weight range. You can also have the system send an email or text message to a designated person if such an event occurs.

The **Entry type** field is useful in order to designate some entries as more important or special in some way. Using **View Options**, you can filter the display to only see certain types of entries.

Double-clicking on any of the entries in **Area 2** allows you to enter lab results, treatments and many types of other data. Click here for more information.

Double-clicking on any of the entries in **Area 3** (**Forms**) allows you to enter data using any number of user-defined data entry forms.

Entering an animal's id number in square brackets like this:

`[2017-2345]`

creates a hot link that you can click on to open that animal's record

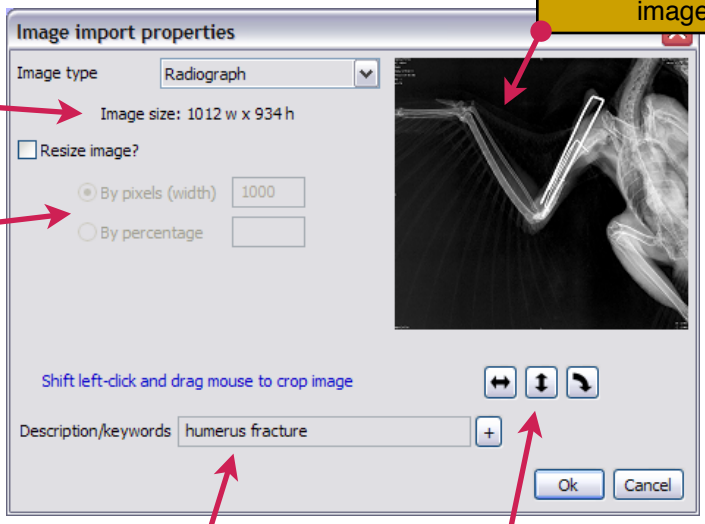
Double-clicking on the **Record treatment** item in **Area 2** (the **red** arrow in the picture) will automatically insert the patient's complete treatment plan into the record. This includes everything that was specified in the treatment plan as well as drug concentrations and amounts. All you have to do is modify it to match what was actually done. This allows you to make a very accurate and complete entry in almost no time at all.

The following macros can be used in any record entry. They will auto-expand once the record is saved. They must be entered in square brackets.

`[USERNAME]` - use this to auto-insert the full name of the currently logged on user.
`[TIMESTAMP]` - use this to enter the current date and time.

Any file can also be dragged onto the form and added as an attachment. For image files, the JPEG or PNG file type are recommended. Other file types, such as Word or Excel files, pdf's or other image file types can also be dragged and dropped onto the medical record. Also note: instead of dragging and dropping a file, you can also right-click in the drop area and choose **Browse for a file**.

When you add an image file, the **Image import** window appears. This allows you to choose the image **type**. Here are some possible choices:



Left-click and drag mouse with shift key pressed to crop the image

Image dimensions

Resize by percentage or specify the width in pixels

Add a description or choose from the keyword list by pressing the **+** button

Flip horizontally or vertically or rotate 90 clockwise

- Radiograph - the default choice
- Zoomed radiograph
- Endoscopic image
- ID photo
- Microscopic image
- Photograph
- Scanned document

When a image is marked as a **Radiograph**, it will be used by the **Cost Estimator** when calculating the total cost. For this reason, make sure you set the image type correctly. Otherwise, the cost estimate will be inaccurate. It is not uncommon to save a zoomed or cropped version of a radiograph that focuses on an area of interest. For these images, choose **Zoomed radiograph** for the image type so these images will **not** be counted by the **Cost Estimator** as another radiograph.

When the image is marked as an **ID photo**, it will be displayed at the top of the patient's chart. This image is displayed as a square with a resolution of 150x150 pixels so any image you import of this purpose should have the same aspect ratio and should ideally be an even multiple of this resolution for the best viewing.

You can add a description to your images and/or choose from the keywords list by pressing the **+** button. Adding a description allows you to find images easily later using the **Image Search** tool.

When you add an image, the **Image import** tool allows you to resize, crop, rotate and flip the image. It is often recommended that images be resized before saving, especially if taken with a modern digital camera since those images tend to be quite large and have many more pixels than are actually needed for a good-quality image. A good recommendation for photographs is to crop and resize an image to a width of about 1000 pixels. This still provides good quality and saves storage space. When you drag and drop the image, the dimensions of the image will be displayed. Radiographs can also be resized but it is important to store a much more higher resolution image. 3500 pixels in width is a good recommendation.

> Do **not** resize radiographs as you usually want to maintain the highest image quality so that you can zoom in on small details later.

To resize the image, check the **Resize image** check box and then choose either **By percentage** or **By pixels**. **By pixels** is usually more helpful. Then enter the desired width (such as 1000 pixels). The image aspect ratio will be preserved.

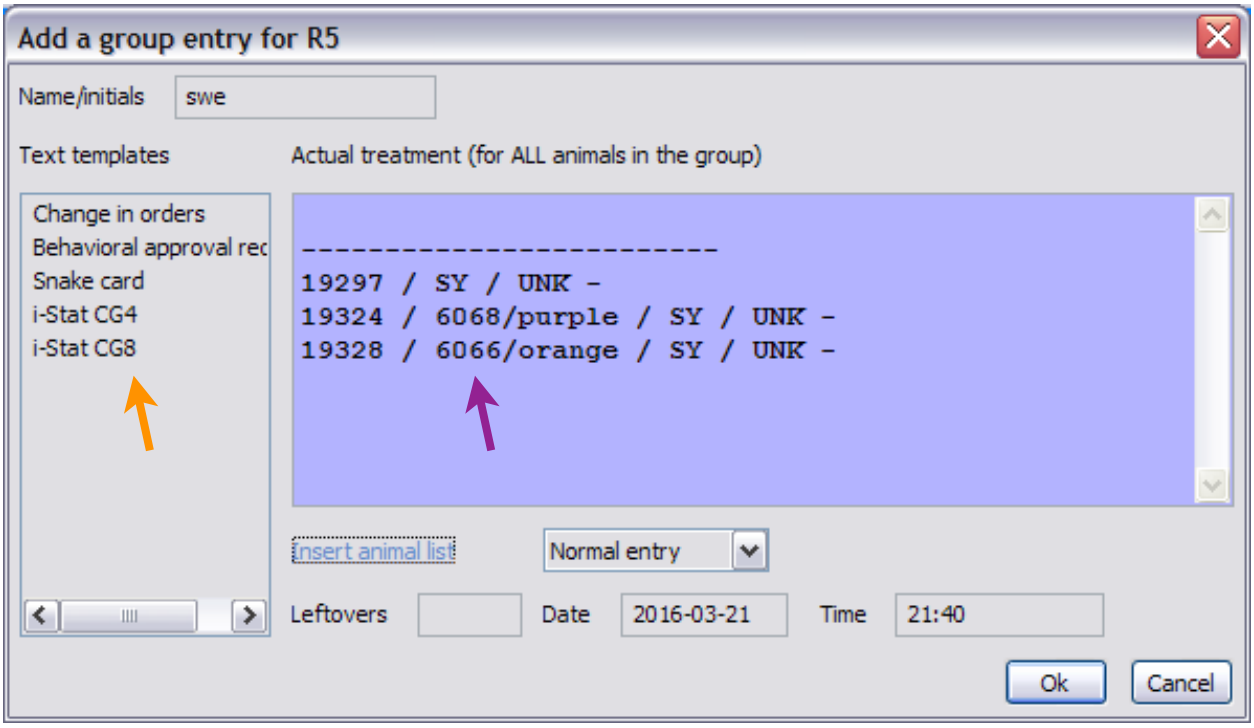
You can flip and rotate the image as well by pressing the corresponding buttons. Finally, you can crop the image by left-clicking and dragging a box on the image preview while holding the **Shift** key down. The program will automatically select the upper-left hand corner of the image if you click within 10 pixels of the corner. This makes it easier to select the upper-left corner. Once you have the image the way you want it, press the **Ok** button. If you made a change that you don't like, simple press the **Cancel** button and start over.

Group entries

To make an entry for all animals in a specific enclosure, right click on the enclosure in the **Enclosure** list on the main screen and choose **Record group entry** from the popup menu. Or you can right-click and choose **Group Operations ▶ Record Group Entry**. In the second case, you will first be prompted to choose which animals to apply this entry to.

Whichever way you choose, a form will appear. It will display what the currently ***proposed*** treatment is. You may simply modify the existing text or completely replace it if necessary. Be sure to enter your initials and the correct date and time. After pressing the **Ok** button, a separate and identical entry will be made in the chart of each of the patients in this enclosure. Click here to see how to set up a group treatment.

Note: The proposed treatment is for ***each*** patient. So be sure to edit the entry to reflect what was really done. For example, if you plan to feed animal 25 grams and there are 4 animals in the group, you should record that 100 grams were fed. Always remember to multiply the treatment food amounts by the number of animals in the location. Otherwise the resulting entries made in each animal's chart will not be correct.



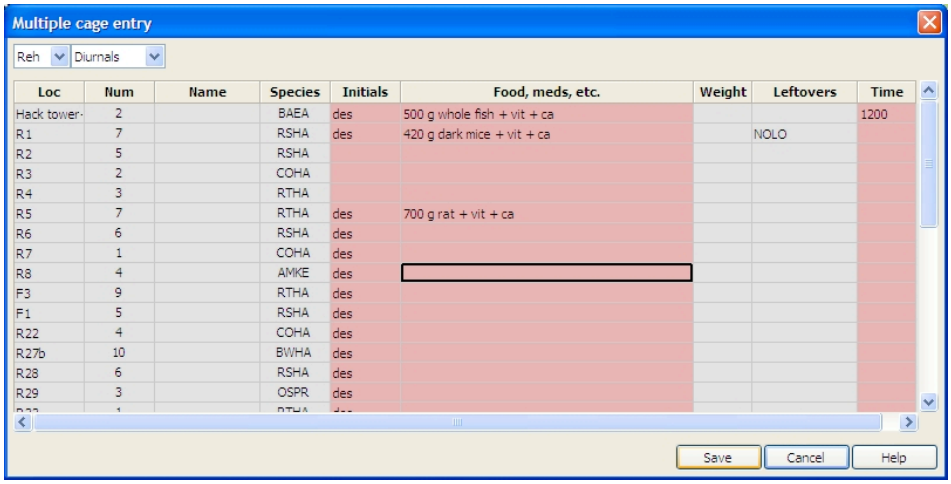
You can press the **Insert patient list** link and a list of each animal's id, band/tag, age and sex information will be inserted (**purple arrow**). This is helpful when you need to record notes about each patient in an enclosure.

You can auto-insert any of the predefined text templates by double-clicking on an entry in the list on the left-hand side of the screen (**orange arrow**). See the Text template editor for more information.

The amount of leftovers can be recorded and you can also specify whether this is a special entry (such as a vet entry or an interesting even) or just a normal entry.

Multiple enclosure entries

To enter treatments for multiple enclosures at once, choose **Tools ▶ Multiple cage entry** from the main menu. A form will appear that contains a spreadsheet that lists all the enclosures that have at least one patient in them.



You can filter the list by **Nocturnal** or **Diurnal** and by **Rehab** or **Resident**. There are columns that allow you to enter the initials of the person who did the treatment/feeding, the actual treatment or food provided, the leftovers (if any) and the time that the treatment occurred.

There is also a column for the weight that can be filled in if the patient was weighed. Obviously, it only makes sense to fill in the weight if the enclosure has only one patient.

The **Initials**, **Food**, and **Time** columns must all be filled in. If not, then the row in the table will be ignored. This is convenient as you may only want to record treatments for some of the enclosures.

> Note: Multiple enclosure entries are most useful for simple cases. Entries for more complicated cases are best handled as described above.

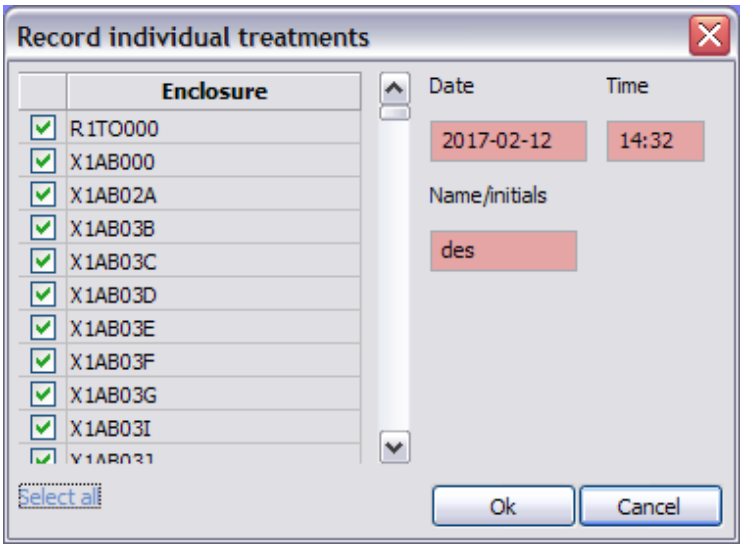
As a time-saver, you can right-click on a cell in the **Initials** and **Time** column and choose **Fill down** to copy the current cell's value down to the bottom of the column.

Once you have entered everything, press the **Save** button and the records for each patient in each of the **Locations** in the table that you filled in will be updated.

Record treatments for all

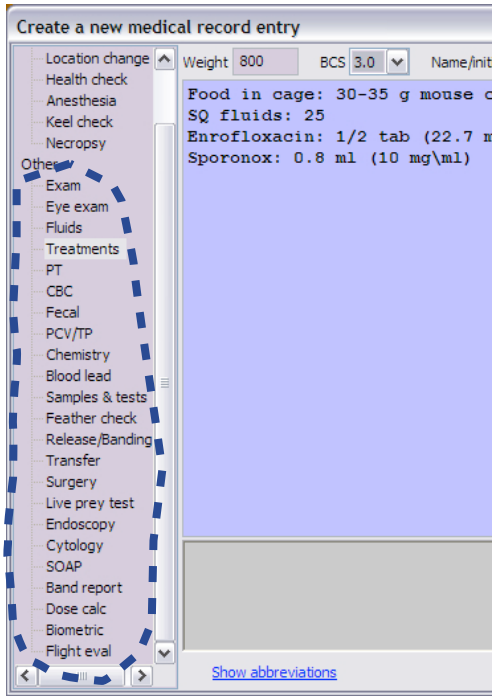
Choose **Tools ▶ Record treatments for all** from the main menu. If enabled on your system, this function will allow you to record the **INDIVIDUAL** treatments for each animal in each of the selected enclosures. Select the enclosures individually or press the **Select all** link to select all enclosures. This function only makes recordings for animals with status of **Reh** and only records medical treatments, not feedings.

Note that is function can create a large amount of data at once so make sure you really intend to do this as it can only be undone by manually deleting each newly created entry.



Entering results of laboratory tests, examinations, etc.

Results for laboratory tests, examinations, surgery, transfers and a whole host of other important records can be attached to a patient's file by clicking on the appropriate links listed vertically on the left side of the medical record entry form. Results for the following lab tests, exams, procedures can be added to a patient's record:



Examinations

- Physical exams
- Eye exams
- Biometric measurements
- Flight evaluations
- Feather checks
- Vitals
- Wound reports
- Swim evaluations
- Behavioral assessments
- External examinations
- Live prey test

Laboratory tests

- CBC
- PCV/TS
- Serum chemistries
- Protein electrophoresis
- Blood lead
- Fecal exams
- Cytologic exams
- Miscellaneous samples and tests
- Urinalysis

Procedures

- Surgery reports
- Endoscopy reports
- Physical therapy
- Imagery report
- Controlled drug usage
- Vaccines

Miscellaneous

- Release/band use reports
- Transfer reports
- Post-release events

- SOAPs
- Dose calculations
- Fluid calculations
- Enrichment
- Program usage
- Training
- Invoices and the procedure log
- Eggs
- Births
- Questionnaires

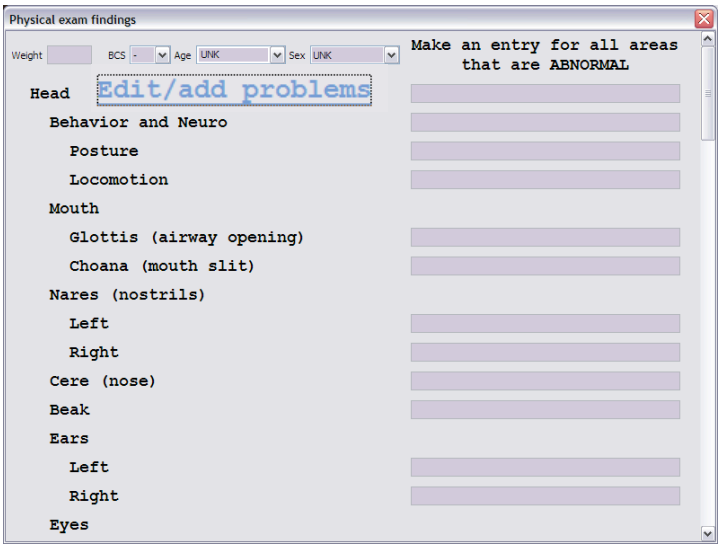
Physical exams

The physical exam form allows you to make entries for any abnormal finding. There are different sections that cover all body areas and systems. When you have completed your entries, press the **Ok** button and your entries will be formatted and inserted into the patient's record. It is usually recommended that you leave an entry blank if the corresponding area or system is normal. Alternatively, you may want to make an entry indicating that no problem was found to make it clear that the exam was completed thoroughly.

Note that the actual entry fields on the form depend on the species group the patient belongs to as it doesn't make sense to have an area for feather condition when examining a turtle. The form is very customizable so the fields you see may differ from the screenshot. The form can include edit fields, drop lists, and check boxes and there is a special field that can be added to automatically schedule the next exam in the future.

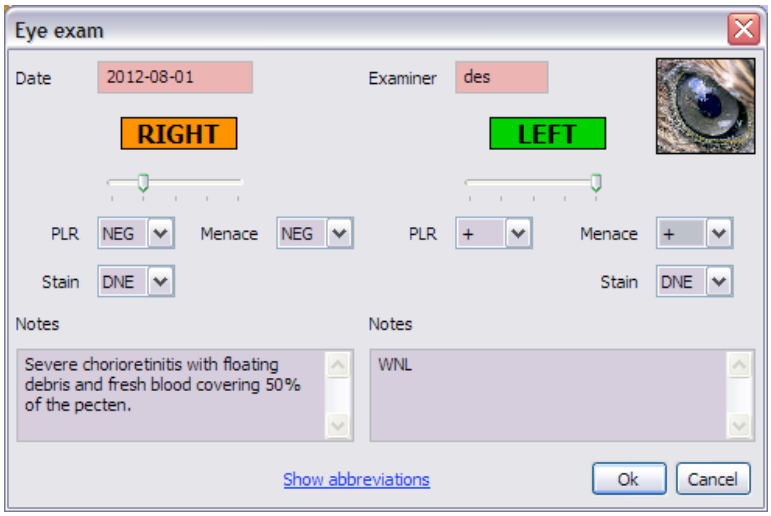
You can also specify the patient's weight, body condition/keel score, age and sex in the appropriate fields at the top of the form. In addition, there is a link that allows you to specify the cause of injury and to edit the problem list.

CONTACT CUSTOMER SUPPORT SO WE CAN HELP YOU CUSTOMIZE YOUR EXAM FORM.

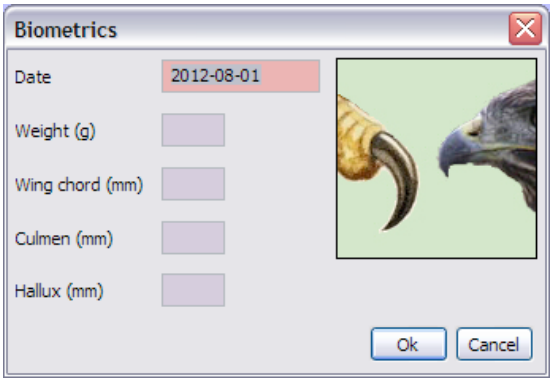


Eye exams

The eye exam form allows you to record your observations and to color code each eye to indicate the severity of the damage. The color coding scheme is very subjective, but if used consistently, it can be very effective in demonstrating changes over time. The color codes range from **red** (completely blind) to bright **green** (perfect vision). There are fields to record the PLR and menace response as well as the results of a corneal stain. The **Notes** fields are used to record any other finding including results of a fundic exam.



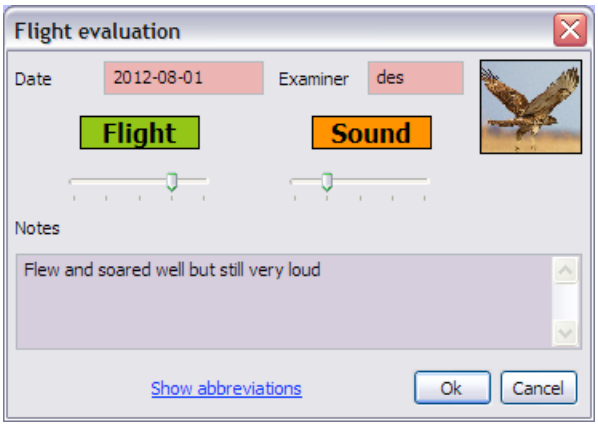
Biometric measurements



Biometric measurements can be recorded using this form. The actual measurements to be recorded are based on the animal's species group. For example, you can record the weight, wing chord, culmen length and hallux length for a bird and you can record various carapace measurements for a turtle.

If you enter a weight value, this value will be auto-copied into the medical record entry as well. This is important and helpful because it is the weight that is recorded in the medical record entry that is automatically graphed in the Historical Data Viewer.

Flight evaluations

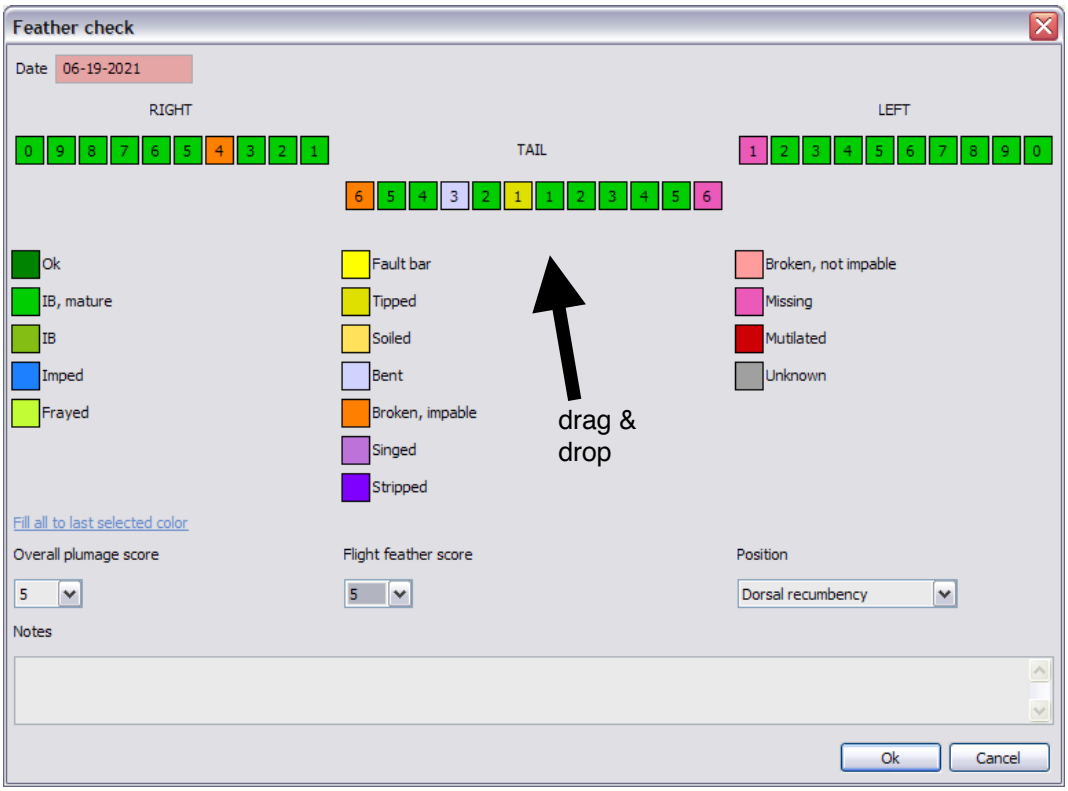


Results of flight examinations can be recorded and scored using a color code. Scores for both the ability to fly and the sound level can be recorded. The color coding scheme is very subjective, but if used consistently, it can be very effective in demonstrating changes over time. The color codes range from **red** (unable to fly or very loud) to bright **green** (perfect/silent flight).

Feather checks

Records of feather condition can be recorded for the primary feathers and the tail feathers. The form is oriented as if the bird was laying on its back for the exam. So the left side of the form is for the right wing. Each feather state is color-coded. Greens indicate better or good feather quality while yellows, oranges and reds indicate progressively worse condition. The condition of a specific feather can be recorded simply by dragging a color from the color palette to the appropriate feather.

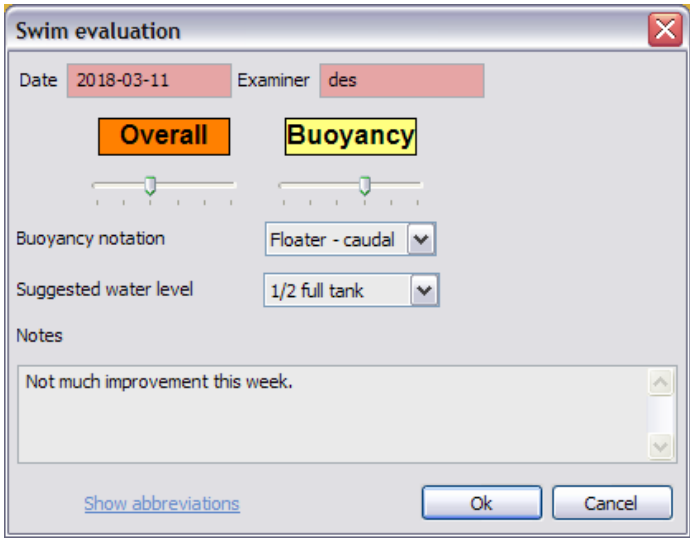
The feather colors default to gray/unknown. You can set them all cells to a specific color by clicking on the desired color and then pressing the **Fill all to last selected color** link.



You can record an optional overall plumage score, a flight feather score, miscellaneous notes and the position of the bird when the feathers were checked. The feather scores are simply a quantitative estimate from 1 to 10. Note that the birds ***right*** feathers are displayed on the **LEFT** when in ***dorsal*** recumbency. This is the typical position for raptors but is not the usual position for other species.

Swim evaluations

Results of swim examinations can be recorded and scored using a color code. Scores for both overall ability and buoyancy can be recorded. This is especially useful for evaluation sea turtles.

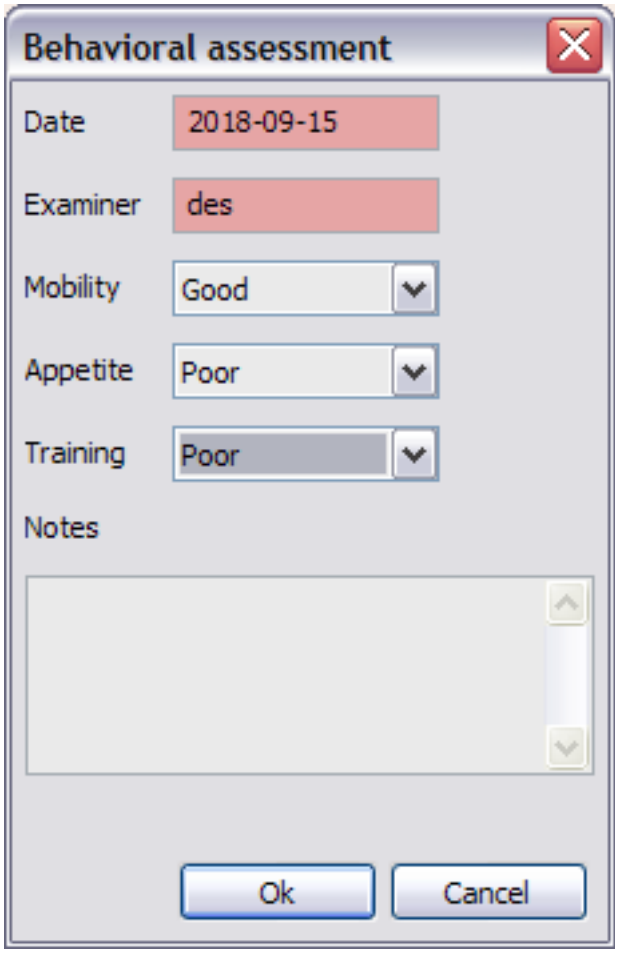


The color coding scheme is very subjective, but if used consistently, it can be very effective in demonstrating changes over time. The color codes range from **red** (unable to fly or very loud) to bright **green** (perfect/silent flight).

There are also fields to describe any buoyancy issues as well as the recommended water level.

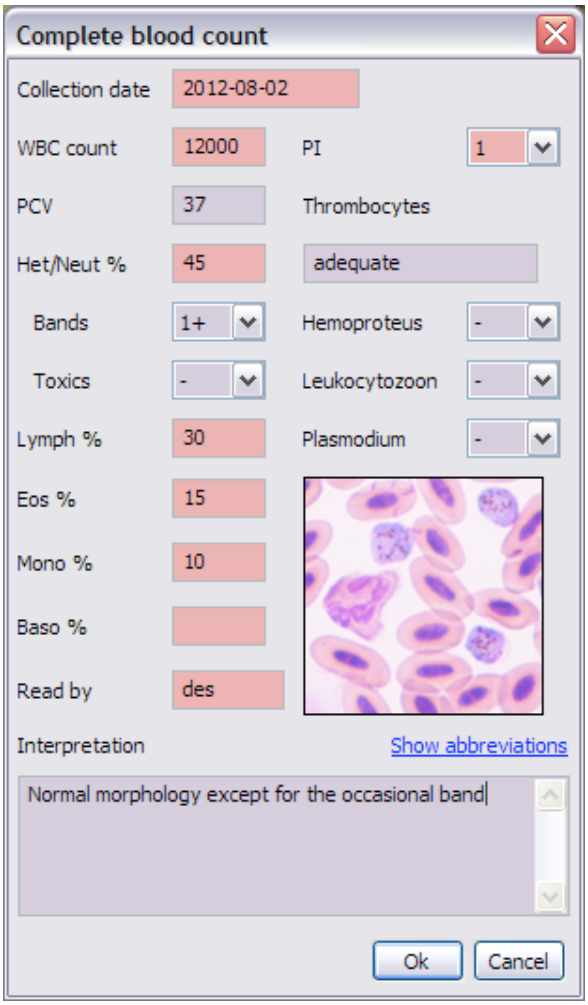
Behavioral assessments

Results of behavioral assessments can be recorded and scored. The results can then me graphed in the **Historical Data Viewer** just like any other numeric laboratory test. Any number of categories can be defined and each category can use different values for the score. Contact customer service for help on configuring your behavioral assessment form.



CBC

Complete blood count results can be recorded including specific findings regarding hemo-parasites, cell morphology, and platelets.



You can configure the system to accept input as percentages, numbers of cells/uL, or 10^3 cells/uL. If using percentages, then the percentages of each cell type must total to 100%.

It is important, although optional, that you enter the corresponding PCV/Hct, if known, as the actual white count can be adjusted up or down based on the PCV. The following formula is used to calculate the WBC count:

$WBC_{corrected} = WBC_{observed} \times PCV / 45$

If the PCV is not supplied, then a correction will **not** be made. If desired, you can also choose to disable this auto-correction function.

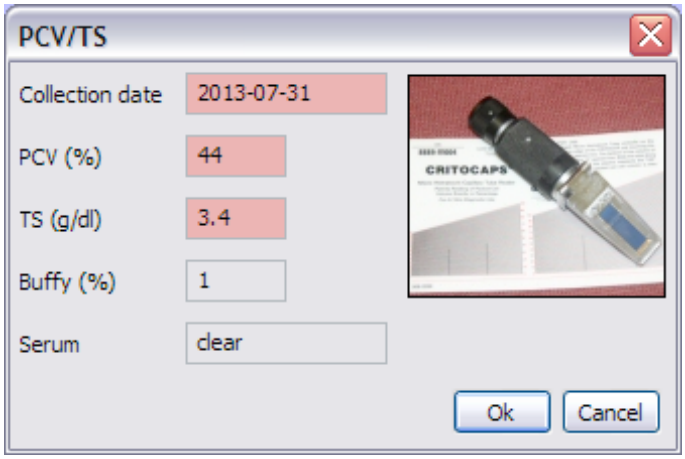
Note: the PCV value that is recorded here is **NOT** plotted as the PCV graph on the **PCV/ TS/Buffy** tab in the **Historical Data Viewer**. That graph uses the PCV value stored in the PCV record (see below). The PCV value stored int the CBC form is plotted on the **CBC** tab in the Historical Data Viewer.

If desired, you can configure the system to automatically create a PCV record using the value entered on this form.

This form can also be optionally expanded to allow for the entry of various RBC indices.

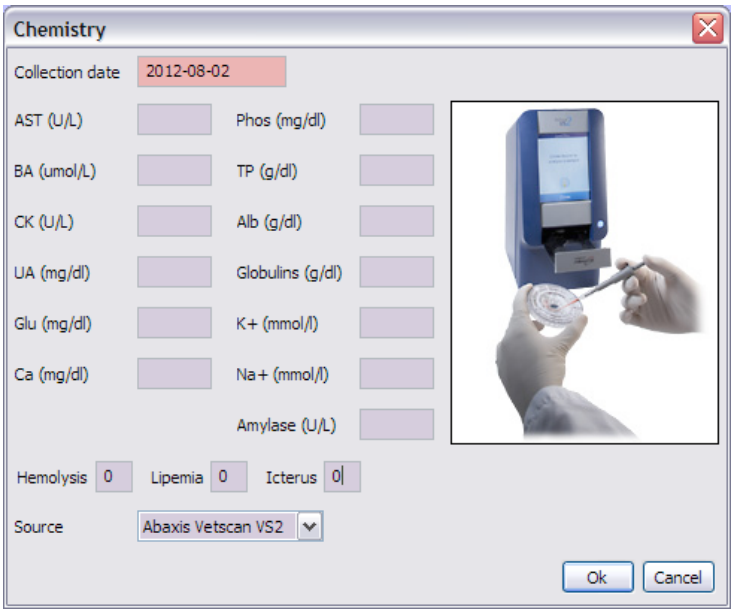
PCV/TS

The packed celled volume (PCV), buffy layer and total solids (TS) can be recorded. The units for PCV and buffy are % and g/dl for TS. A subjective interpretation of the plasma can also be recorded. The PCV/TS values entered here a automatically graphed in the **Historical data viewer**.

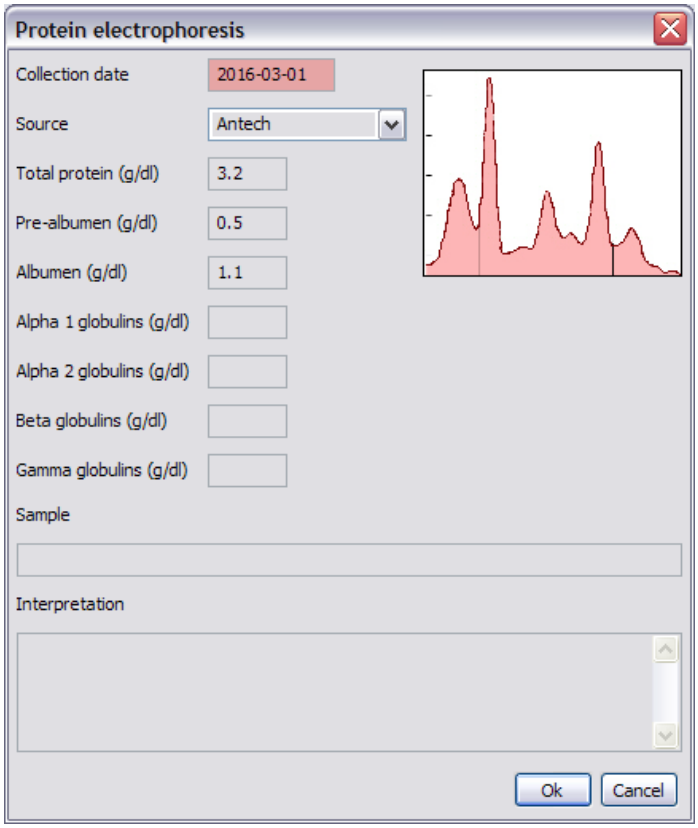


Serum chemistry

Blood chemistry results can be recorded using this form. The actual fields present depend on whether the patient is a mammal or avian/exotic. The source of the results can also be chosen from a configurable list.

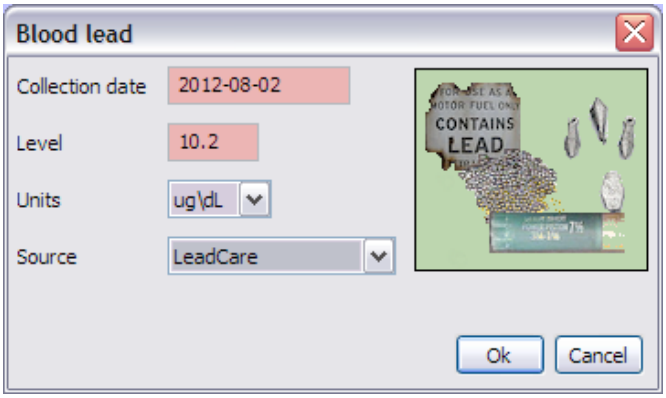


Protein electrophoresis
Use this record to store serum EPH data. You can specify each fraction as well as record notes about the source of the results, the sample and your interpretation.



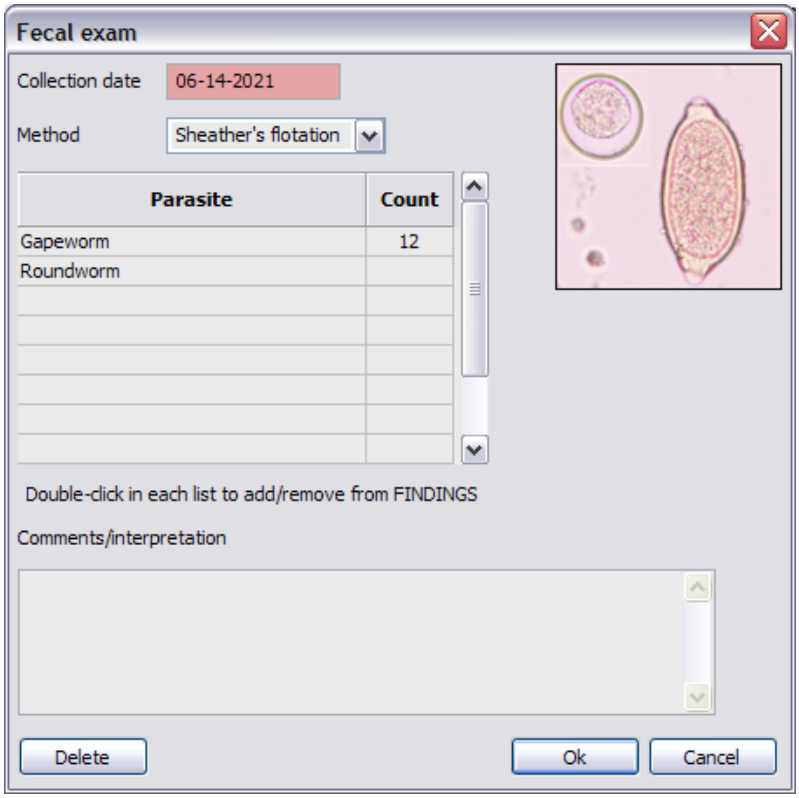
Blood lead
Blood lead values can be recorded using this form. The **units** (i.e. ug/dL or ppm) and the **source** of the results can be selected from a configurable list. These are configured in **Edit List Choices** (choose l**ead_units** and **lead_source**, respectively).

Note: the **Level** can either be a numeric value or you can choose **High** or **Low.**



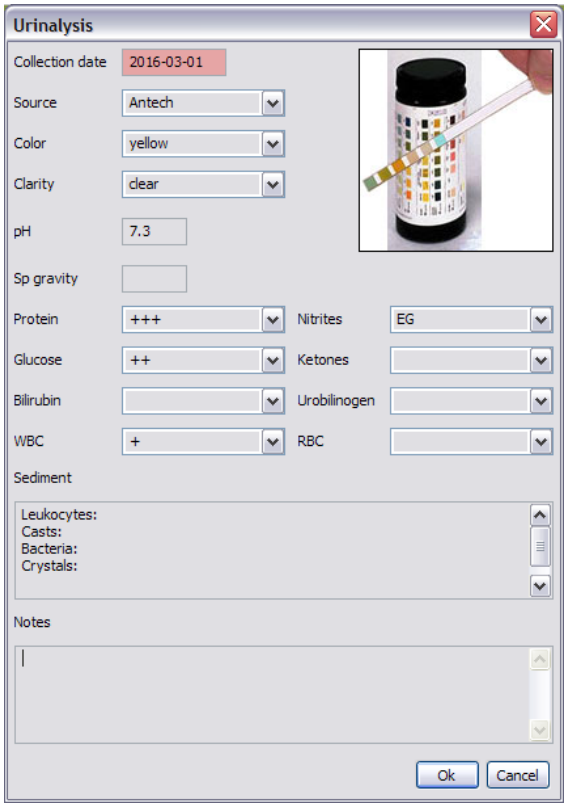
Fecal exams

Results of fecal exams can be recorded with this form. Click on a row in the **Parasite** column and select an choice from the list. You can provide an optional **count** for each parasite. The count value can be an actual number or a relative value like +2. If the exam was negative, simply leave the parasite list empty. You can also specify the **type** of flotation, who the fecal was read by, as well as any other **comments**.



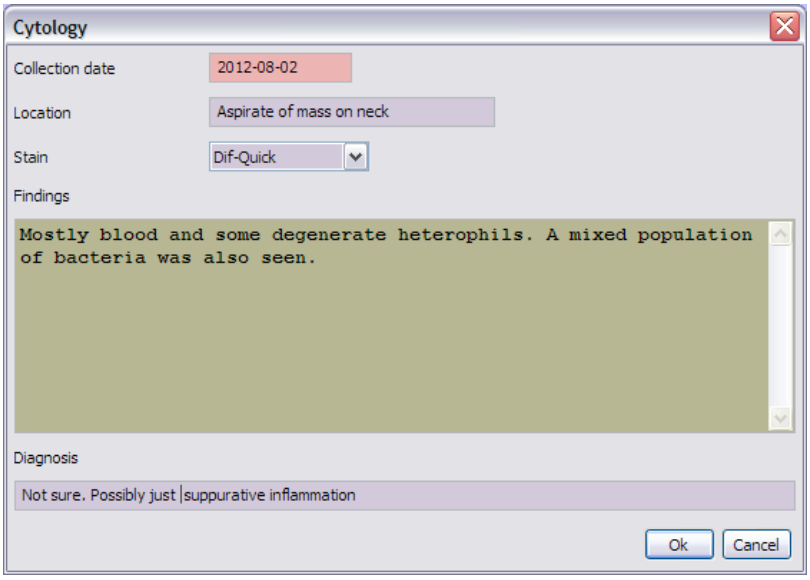
Urinalysis

Urinalysis results are recorded with this form. There are fields for the physical properties (such as color and clarity), biochemical dip-stick tests, as well as a description of the sediment and your notes and interpretation.

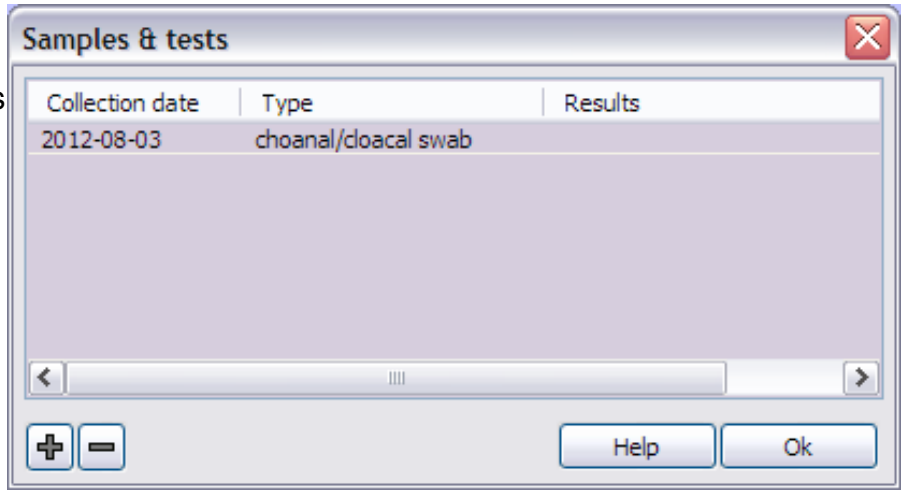


Cytologic exams

Cytologic exam results can be recorded using this form. There are fields for the sample collection **Date**, the **Location** where the sample was obtained, the **Type** of sample (i.e. skin scrape, aspirate, etc), the **Stain** used as well as the **Findings** and a **Diagnosis**.
The choices for the **Type** and **Stain** are configurable (Editing list choices).



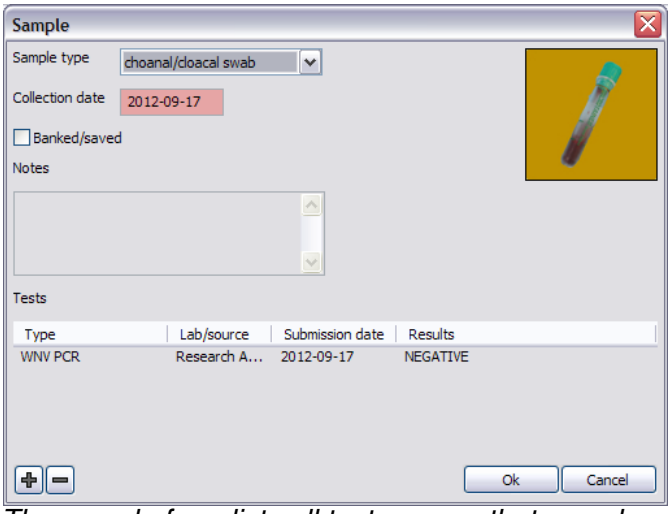
Miscellaneous samples and tests



Samples and test results that do not fit into one of the above mentioned pre-defined categories can also be recorded in **RaptorMed**. After double-clicking on the **Samples & tests** choice, a list of current samples will be displayed. You can add a new one by pressing the **+** button or removed the selected one by pressing the **-** button. You can edit the selected sample by double-clicking on it.

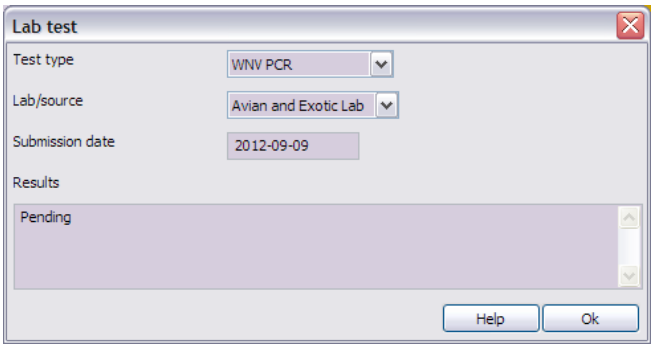
When you add or edit a sample, you must select the **Sample type** and **Collection date**. There is also an optional **Notes** field and you can specify whether this is a **Banked** sample. Banked samples are samples that are collected but saved for future use. You can find all banked samples easily using the **Sample Viewer**.

You can add a new **test** by pressing the **+** button or remove the selected one by pressing the **-** button. You can edit the selected test by double-clicking on it.



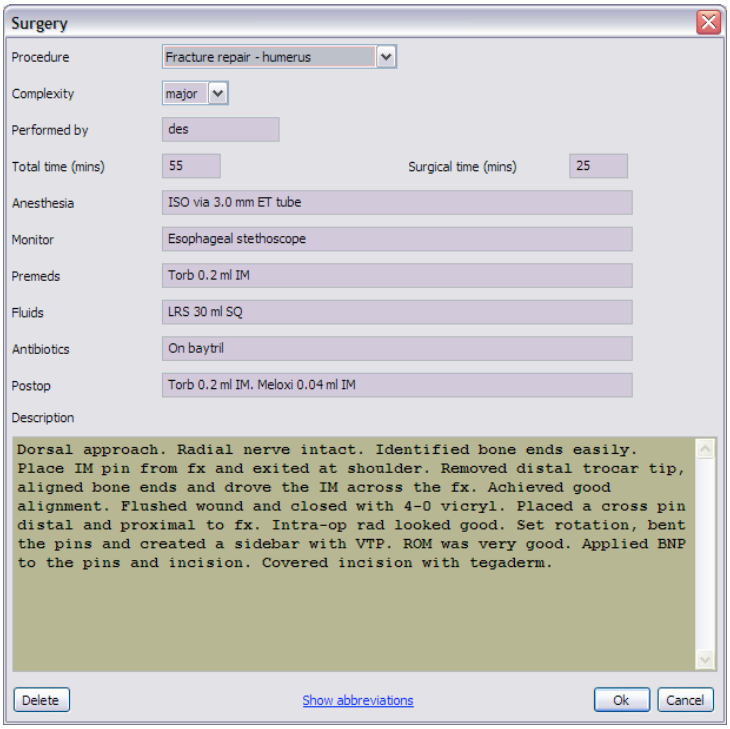
The sample form lists all tests run on that sample.

The test results form allows you to specify the **Test**, the **Lab**, the **Submission date,** and any **Results**. If the **Results** field is left blank then this test will be considered Pending in the Sample Viewer.



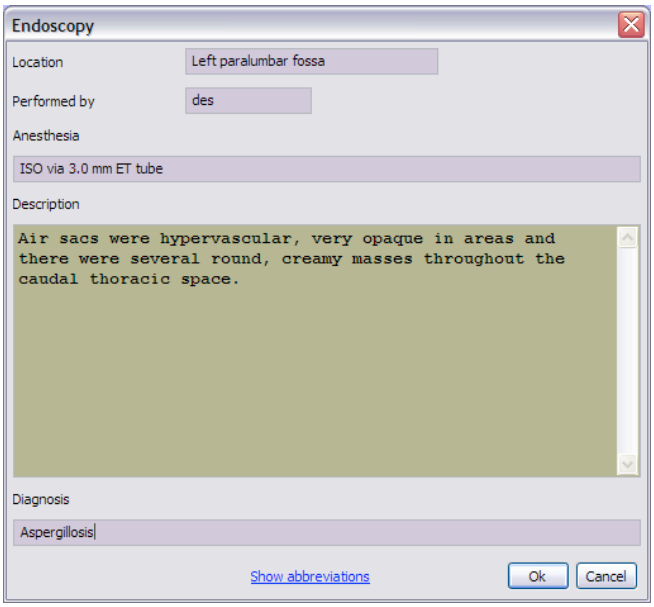
Surgery reports

Surgical reports can be recorded using this form. The actual procedure performed is chosen from the **Procedure** list. The list of choices is configurable. The **Complexity** field allows you to specify if this was a **Major** or **Minor** procedure and this choice is used by the Cost Estimator when calculating the patient's total cost. You can also record the **Total time** and the actual **Surgical time**. This is very useful to track trends and gauge your surgical skill over time. There are also fields to record the **Anesthesia protocol**, your **Monitoring methods**, **Pre-medications**, **Fluid therapy**, **Antibiotics,** and any **Post-op medications**. Each of these fields is pre-filled with commonly-used text and this text can be edited or replaced completely as needed. There is also a large edit field to record the actual procedure.



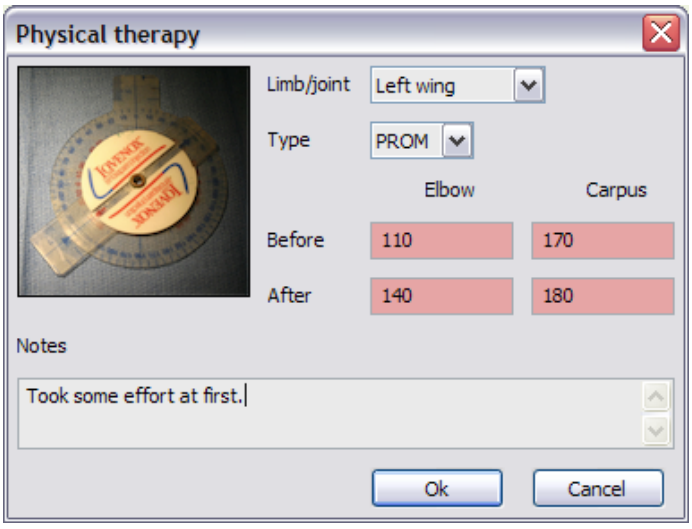
Endoscopy reports

Endoscopic procedures can be recorded using this form. There is a field to record the location that was scoped (i.e. trachea, air sac, etc), a field to record the anesthetic protocol used, and a field to actually record the procedure and findings as well as a diagnosis if there was one.



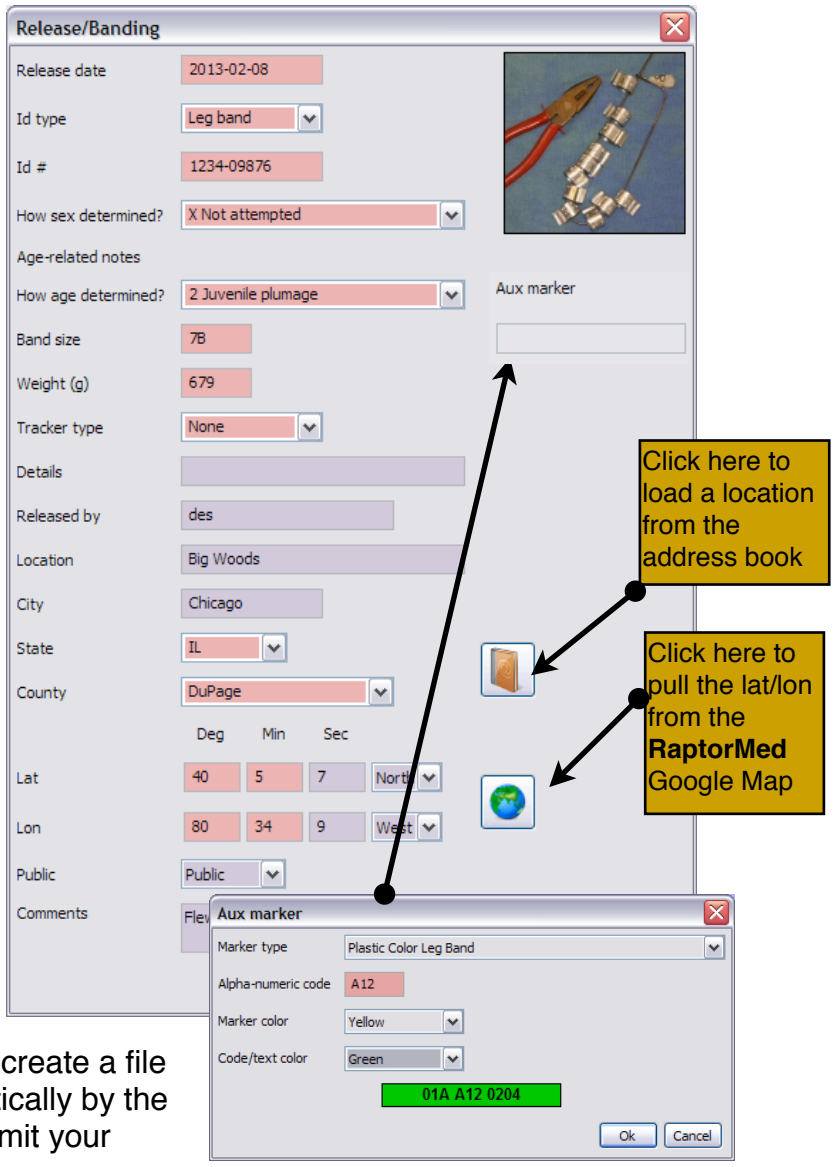
Physical therapy

Physical therapy sessions can be recorded with this form. You can select which limb received the therapy as well as the beginning and ending angles for each of the major joints. This data is graphed in the Physical therapy chart. The choices for the limb/joint as well as the Type are configurable using **Edit List Choices** (choose **PT_location** and **PT_type**, respectively).



Release/band use records

Releases (with or without a federal band or other identification device such as an ear tag) are recorded with this form. The **Id type** list allows you to choose the type of identification device. There are several options (including "**None**") to choose from. The **Id number** field is used to store the unique identification number that is on the leg band or ear/wing tab.



If you enter a band number that is already in use, you will be prompted to continue. Since these bands are unique, this should typically not happen.

If you choose "**Leg band**", then additional fields will be enabled that allow you to enter all the information that is required to be submitted to the USGS Bird Banding Lab (BBL). **RaptorMed** can then create a file that can be imported automatically by the BBL's Bandit Software to submit your banding data. Click here for more information on how **RaptorMed** integrates with Bandit. If your facility does not federally band your avian patients on release or for non-avian patients, this form will be simpler and will not have all the fields shown here.

If you do submit banding data to the BBL, it is very important that you make the correct entries in this form or your data may not be accepted. This is especially important for the **How sex determined**, **How age determined**, **Id number,** and **Band size** fields. The Age-related notes field will contain any notations that you made in the **Patient info** form, usually when the patient was first admitted. These notes can help to serve as a

reminder for how the age was determined. In addition, the currently specified sex and age are displayed in the captions next to the **How sexed** and **How aged** list boxes.

If appropriate, select the type of tracking device in the **Tracker type** list and enter any additional details in the **Details** field.

This form also supports optional **Auxiliary Markers** and these can be entered on this form if necessary. This field is not directly editable. To enter a value, double-click in the field and a form will popup that allows you to choose the code and colors for the marker. The field at the bottom will turn **green** when you have made valid entries. If enabled, auxiliary markers can be entered **without** a code.

To clear a previously set value, right-click on the field and choose **Clear**.

You can also enter information about any tracking devices that may have been attached prior to release.

You should also enter the location where the release took place, including the latitude and longitude, if known. If the animal was released at a known site in the **Address Book**, you can import all the relevant information automatically by pressing the **Address Book** button and selecting the appropriate site. Click here for more information on the **Address Book**.

Latitude and Longitude entry

You can enter degrees, minutes and seconds separately in the three fields or you can enter degrees with a decimal point as in

`45.334345`

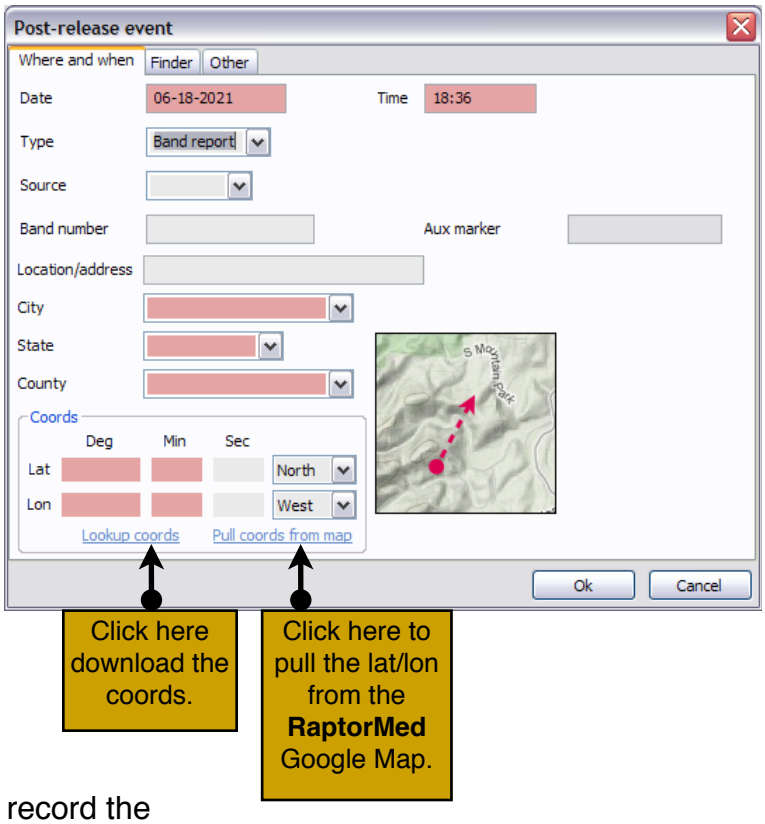
You can also pull the exact latitude and longitude coordinates from the **RaptorMed Google Map**. To do this, load the Google Map into your browser. Find the location on the map and left-click on the location. Now, back in **RaptorMed**, press the **Google Map** button and the coordinate fields will be filled in automatically for you. Click here for more information on the **RaptorMed Google Map**.

You can also record whether the release site was on **public** or **private** land.

Post release events

These events include any sort of post-release contact. It could be a band report, a documented visual sighting or a telemetry report. The entry form has three tabs.

Tab 1 - Where and when - Record the location of the sighting as well as the **Type** of report (i.e. Band report, sighting, etc) and the report **Source**.



Latitude and longitude - these must be filled in if you would like to take full advantage of the **Band Reports** report. These coordinates can be entered in several ways (click **here** for more information).

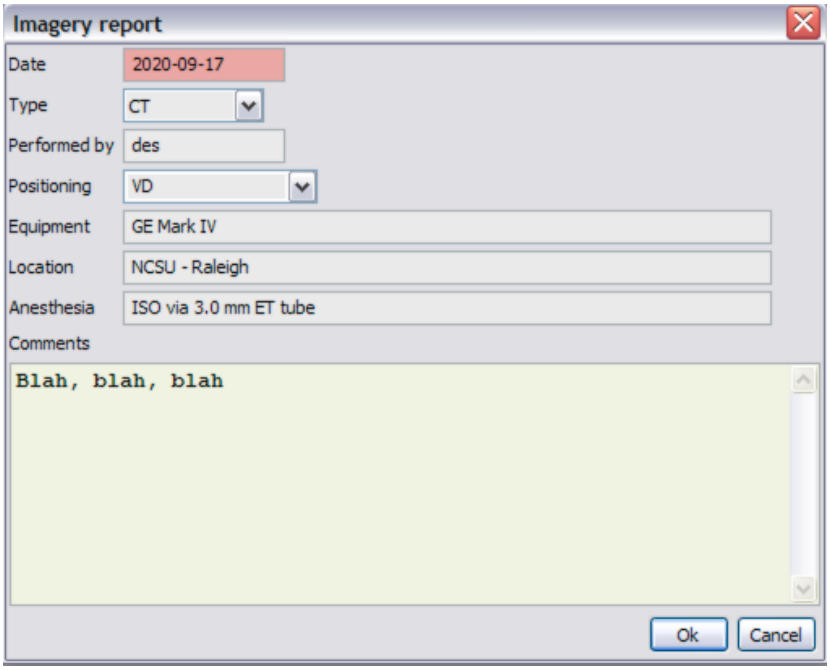
Tab 2 - Finder - Record contact information about the the person made the report.

Tab 3 - Other - To record a USGS **Bird Banding Lab (BBL)** band report in the USA, you will need to record the **Condition** and **How found** codes. These are usually stated on the official band reports that you will receive from the BBL If the report came directly from the person who found the banded animal, choose the most accurate codes for the situation.

The **Notes** field can be used for any additional information. The **Location** and **Finder info** fields are now deprecated and should not be used for any new reports.

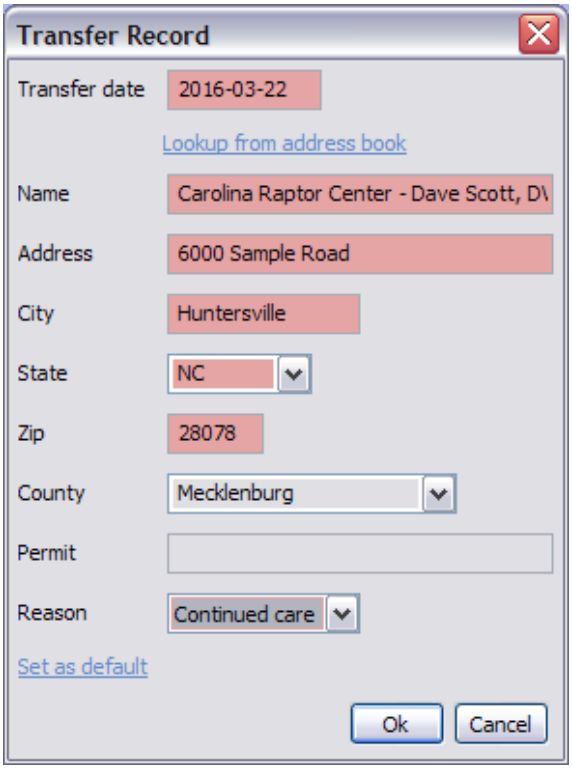
In cases where the animal is readmitted as a new patient, it is important to attach the band report record to the **original** animal's chart, not the new patient's chart.

Imagery report
A record of an imaging studies can be recorded with this form. You can record notes about the type of study and the equipment used as well as how the patient was anesthetized and your findings.



Note that you can add radiographs or other images by simply dragging and dropping the image file on the chart in the **New Entry** form. However, the **Imagery report** allows you to provide more written documentation about the imaging study with or without the actual image file.

Transfer records
All transfers should be recorded with this form. This is very important as this information is required on many state and federal reports.



You must enter the information for the recipient including the permit number. If the animal was transferred to a facility in the **Address Book**, you can import all the relevant information automatically by pressing the **Lookup from address book link** and selecting the appropriate facility. Click here for more information on the **Address Book**.

Animals are transferred for several reasons including:

- For continued care with the hopes of eventual release.
- For permanent placement if non-releasable.
- Transferred live or dead for scientific/ education use.
- For falconry or propagation programs.

The transfer **Reason** is a mandatory field for installations in the United States as this field is required by the US Fish and Wildlife Service. The system can be configured to add customized choices for the transfer **Reason**.

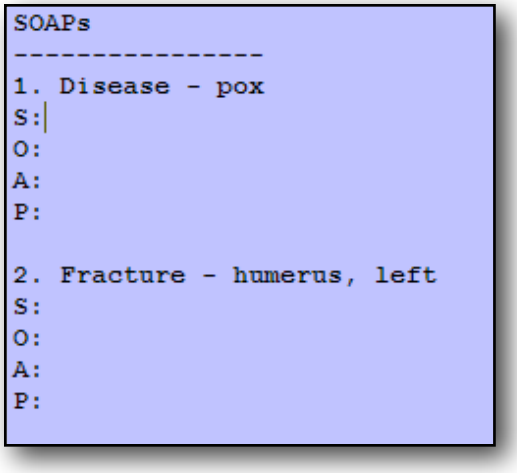
The **Notes** field is optional but it can be used to report transfers of body parts in deceased animals in the US FWS Possession report.

Note: When transferring a patient, the patient status should be set to **T** and the **Final date** should be set appropriately. Click **here** for more information on finalizing a patient. The one exception is when the patient is deceased (with status of **DOA**, **D**, **D24**, **EOA**, **E**, or **E24,** etc) and it is transferred dead for education or scientific purposes. In this case, the status should be left unchanged and should **not** be changed to **T**.

You can press the **Set as default** link to save the current choices. These will be used as the default values the next time you create a Transfer record. This is helpful if you often transfer animals to the same place.

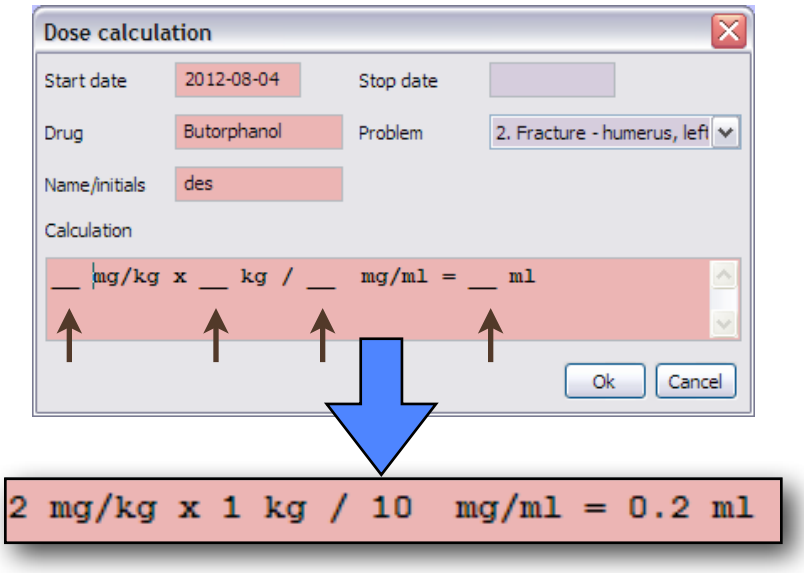
SOAPs

Clicking on the SOAPs item inserts a pre-formatted block of text into the medical record that has a SOAP entry for each unresolved problem (click here for more on **Problems**). This simply provides a shortcut so that you don't have to type as much. Note that use of this feature, and SOAPing in general, is completely optional and may not be necessary at your facility. The SOAP can be printed in several different format.



Dose calculations

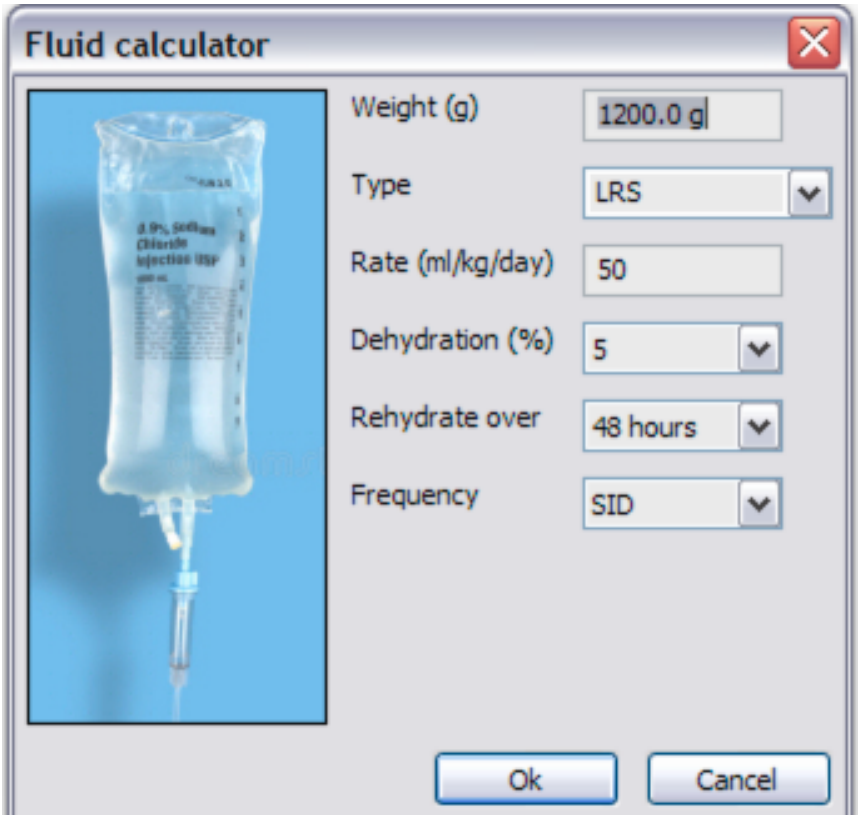
This feature is used to document how drug doses were calculated. This is generally only useful in an educational setting (i.e. a vet school) where students are required to show their math. After clicking on the **Dose calc** item, a form appears that allows you to specify the drug and the problem for which the drug is meant to help. There is also a field that is pre-filled with the dose calculation formula. The student must edit the formula and enter the actual numbers to show the calculation. It is meant to be a manual process so that the student is forced to do the calculation. The areas indicated by the arrows in the screenshot are to be replaced with actual numbers.



Fluid calculations

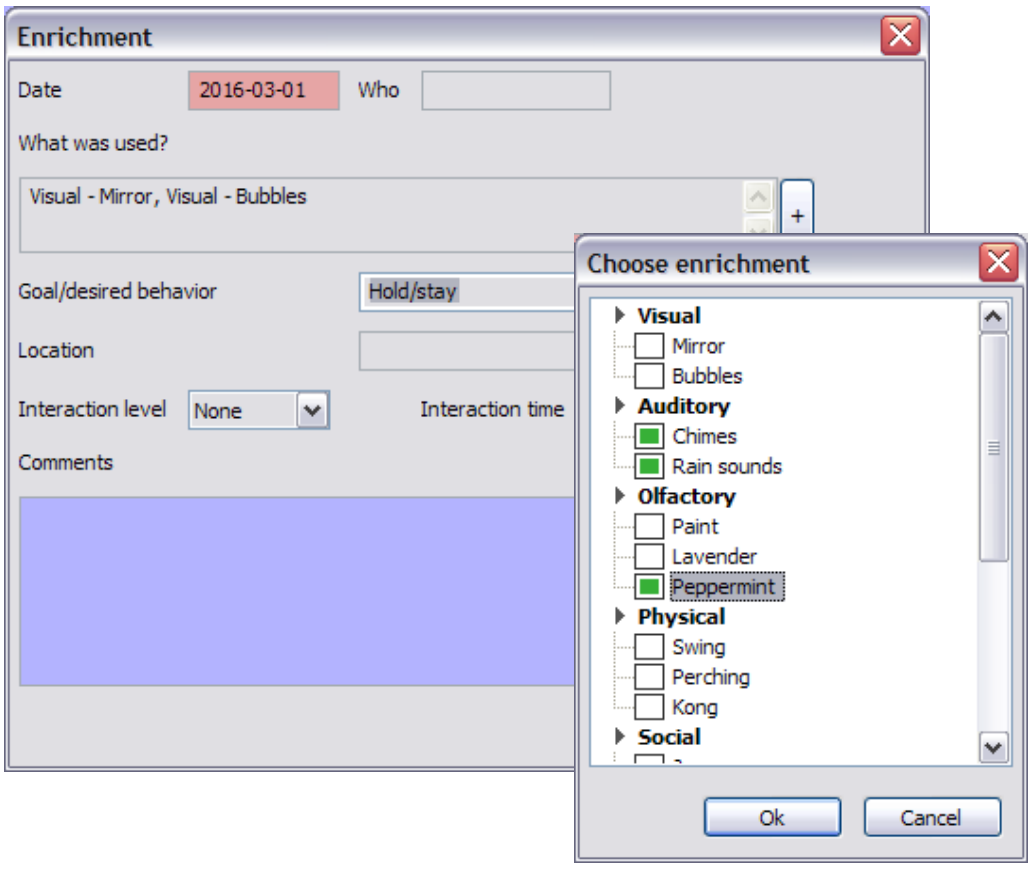
This tool does quick fluid calculations for you. After clicking on the **Fluids** item, the fluid calculator window will appear. This form allows you to specify a maintenance rate, the type of fluids, the dehydration level and to choose how quickly you want to replace the deficit, as well as how often to administer the fluids. It will then perform the calculation

and insert the corresponding fluid therapy plan into the patient's chart. If you have entered a weight in the animal's record, then it will be pre-filled in the **Weight** field. Otherwise, you have to enter a weight manually.



Enrichment
Enrichment activities can be recorded here. There are multiple fields to record various aspects of the activity including the type of enrichment and time. Click on the **+** to the right of the **What was used?** field. This will produce a hierarchical list of choices for you to select from.

All choices in all the lists are **configurable**.



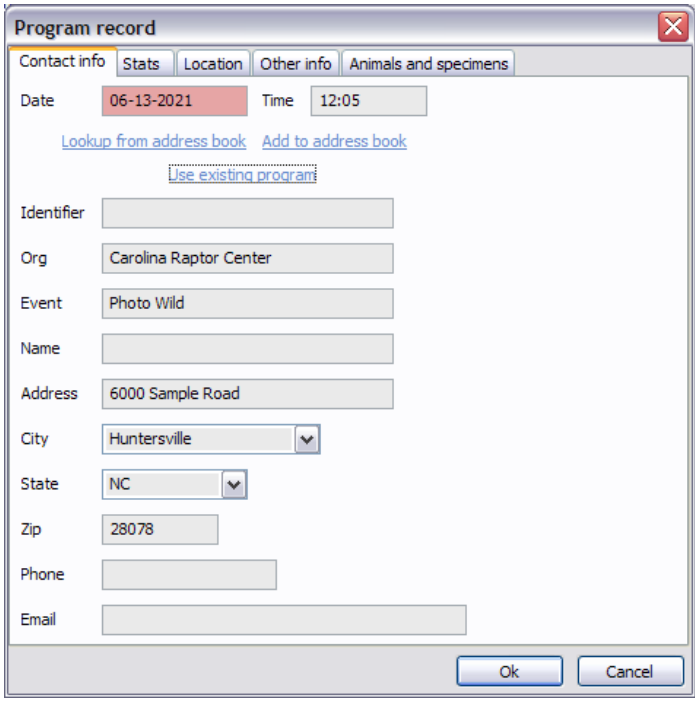
Program record

The **Program record** form allows you to record an animal's usage in an educational program. This is important if you are required to file program usage reports to various government agencies. This option is only available for animals with status **PR**.

The **Program record** entry form has several tabs. There are entry fields to record all sorts of information but only the program **Date** is required. Some or all of these fields may be important depending on the requirements of your reports.

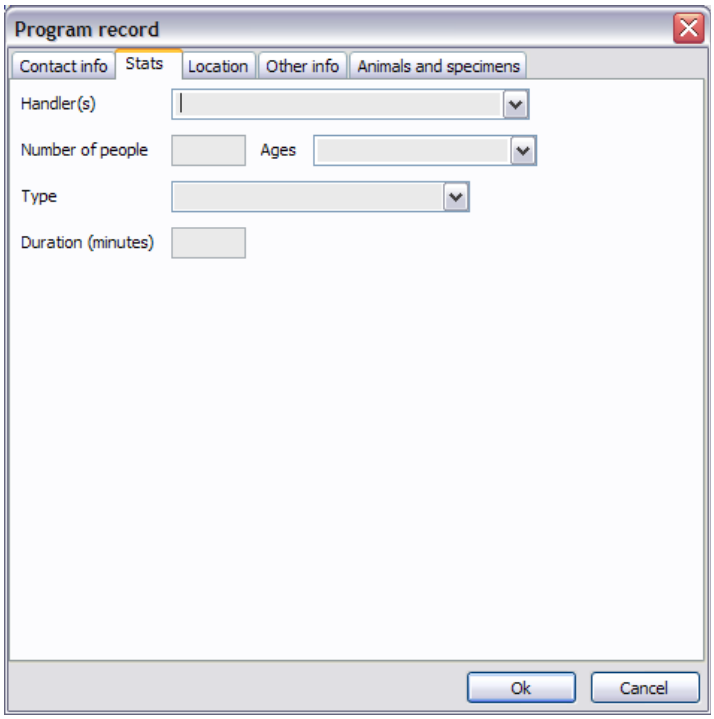
Tab 1 - Contact Info

If you often do programs at a specific location, you can create an **Address Book** entry for that location and recall it easily by choosing **Lookup from address book** link. If you expect to use a new entry's information again in the future, you can create a new **Address Book** entry by pressing **Add to Address Book**. You can also use the information from an existing program record by choosing **Use existing program**.



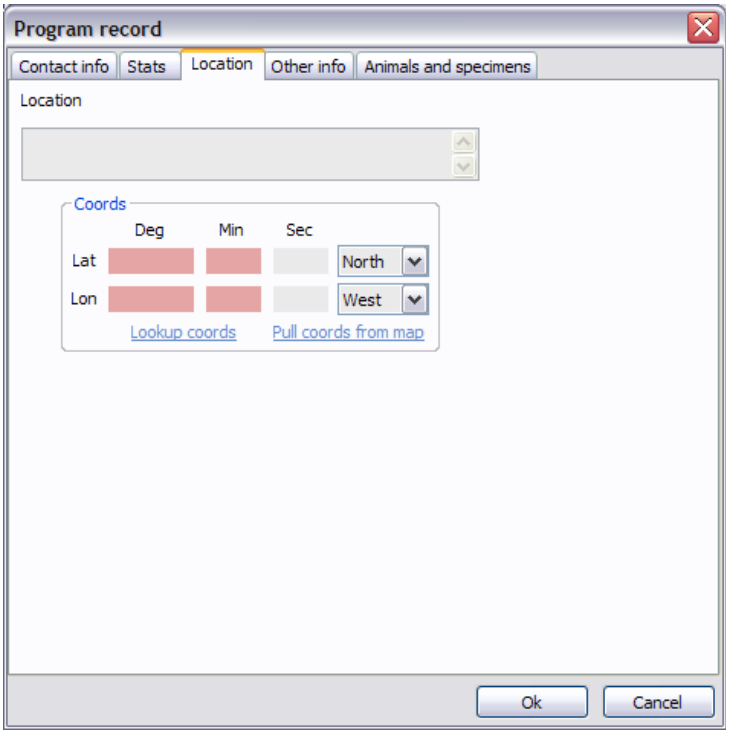
Tab 2 - Stats

This tab allows you to record information about the audience as well as the type of program. The **Ages** list is filled with items that are configured in **Edit List Choices** (choose **Program Ages**). The **Type** list is filled with items that are configured in **Edit List Choices** (choose **Program type**). The **Handler** list is filled with entries from the **Address Book** that have the **Handler** checkbox checked. You can either select single name from the list or enter more than one separated by commas

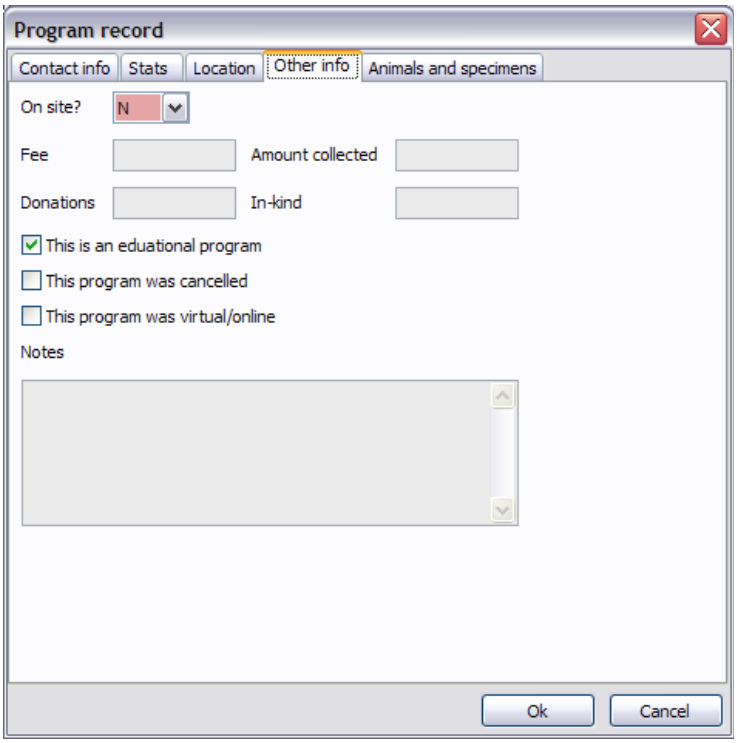


Tab 3 - Location

The **Location** tab allows you to enter an alternate location for the program. Usually, programs take place at the address listed on the **Contact info** tab but sometimes that is not the case. In these cases you can enter an alternate address. If you provide a lat/lon, then programs can be plotted on a Google map.



Tab 4 - Other Info
This tab allows you to record financial information including the program fee and amounts collected as payment, donations and/or in-kind donations.
You can check if a program was **cancelled** and if it was **virtual** and these choices drive various reports.

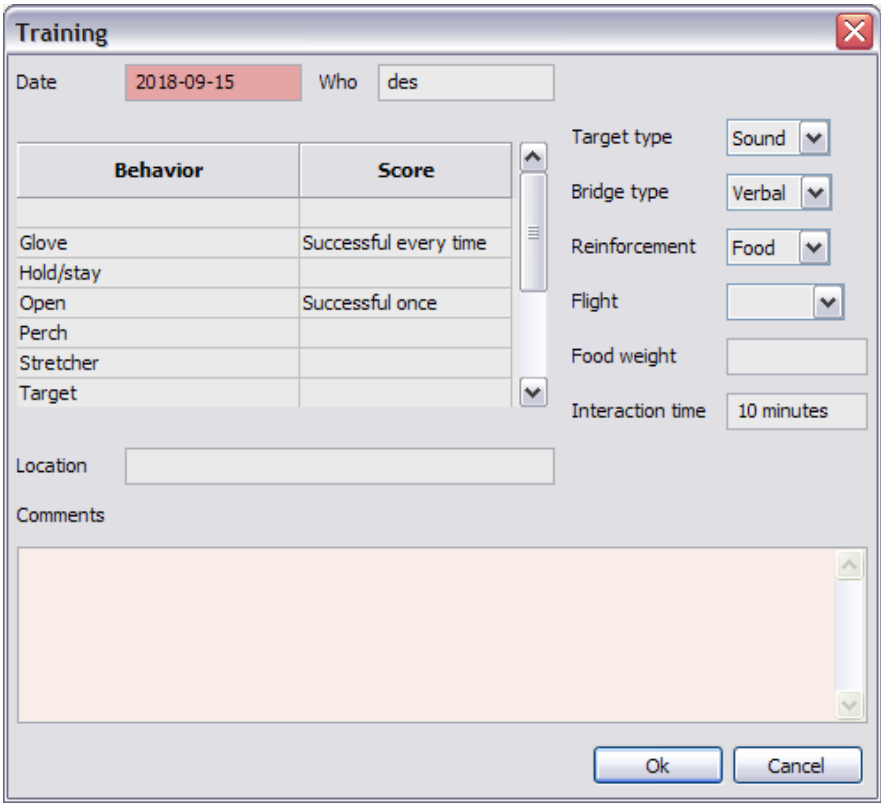


Tab 5 - Animals and specimens
This tab lists which animals and specimens were or will be used in this program. This is a view-only screen. You can actually add and remove animals and specimens using the **Program Manager**.

An animal's program history can be viewed by choosing **Tools ▶ Program log** from the **Action Bar**. Click **here** for more information.

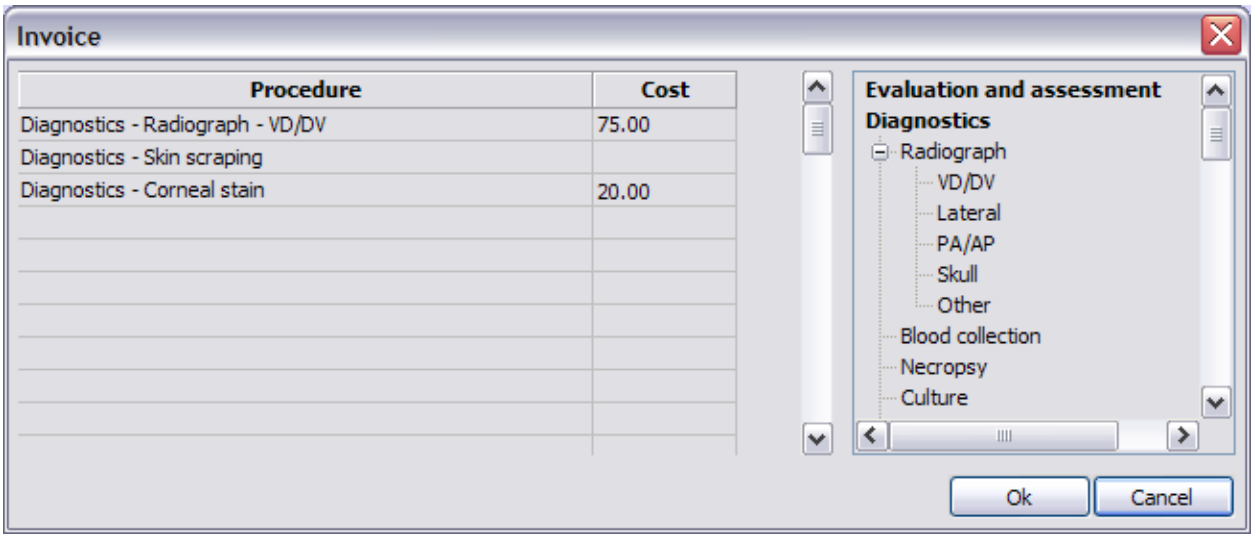
Training

The training form allows you to record many aspects of a typical training session. All choices in the lists are customizable using the list choice editor. Click **here** for more information. This form allows you to record a score for 1 or more desired behaviors at once. Click in the **Score** column to select a value for each behavior of interest. Behaviors that are not scored will be ignored and no record will be made for them.



Invoices and the procedure log

The procedure log allows a ledger of procedures with optional prices to be recorded. This data can then be used to create an invoice. To log procedures, select the **Procedures** link. Note that this may be displayed as **Invoice**, depending on how your system is configured. A screen will be displayed that allows procedures to be selected from a hierarchical list on the right-hand side.

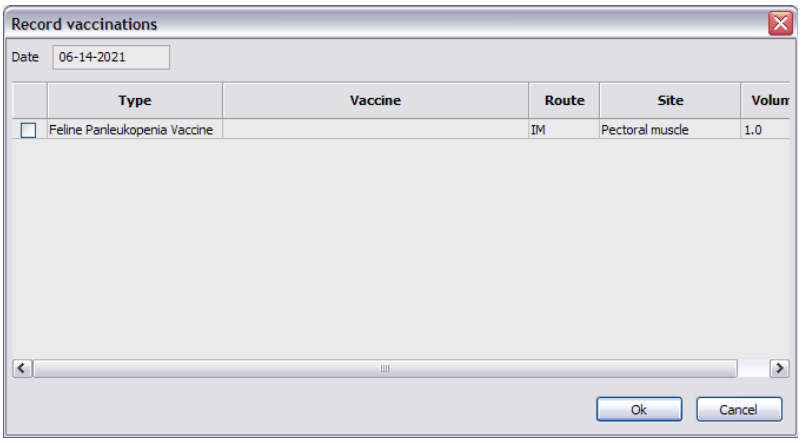


Double-click to select an item. It will be added to the list on the left-hand side. You can edit both the entry and the cost or you can edit/remove an item that was added incorrectly.

Depending on your setup, there may be fields to enter **Anesthesia time**, **procedure time** as well as to check off which procedures were actually performed under anesthesia.

The data entered here can be used later to generate an Invoice.

Vaccines

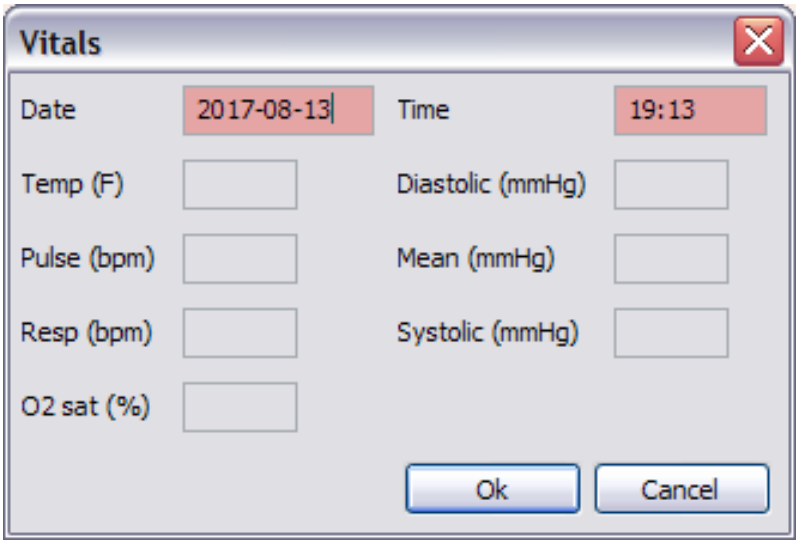


This tool allows you to record vaccinations. A form will appear that allows you to choose the vaccines from a list. Fill in the date (which will default to today), the route of administration, location and the volume (for each injection). Press **Ok** and an entry will be added to the medical record. You can then select the Vaccine History link in the **Action Bar** and see a list of all vaccines given.

Note: the choices for the **Injection site** can be configured in **Edit List Choices** and the choices for the actual vaccines are configured in the **Medication Editor.**

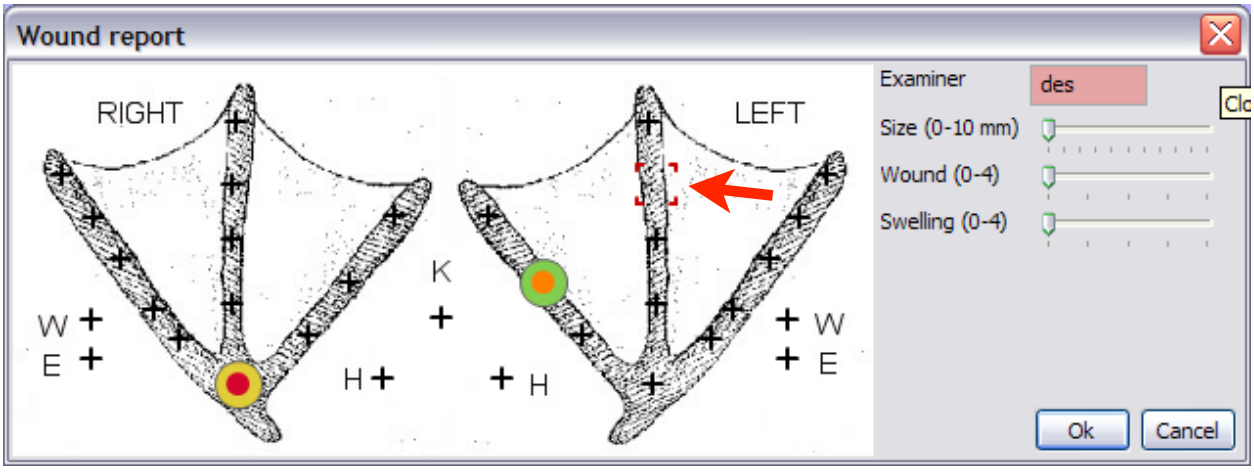
Vitals

The vitals form allows you to record various vital signs including TPR, O_2 saturation and blood pressures.



Wound reports

Wound reports allow you to record characteristics about wounds using a visual tool. The wound reports use a template which includes a in image with one or more areas identified as common wound sites. A good example would be the feet of a bird of prey where bumblefoot lesions are commonly found or the shell of a turtle which can often be cracked from roadside trauma. To create a **wound report**, *double*-click on the **Wounds** entry in the list on the left-hand side of the Medical Record Entry form. This will open the *first* wound report template that your system is configured with. If your system is configured with more than one wound template, you can *right*-click on the **Wounds** entry and choose from a list. Please contact customer service for help in setting up wound templates. The **Wound report** form will appear. It displays a graphical image of the affected body area with **+** marks indicating specific locations where a recording can



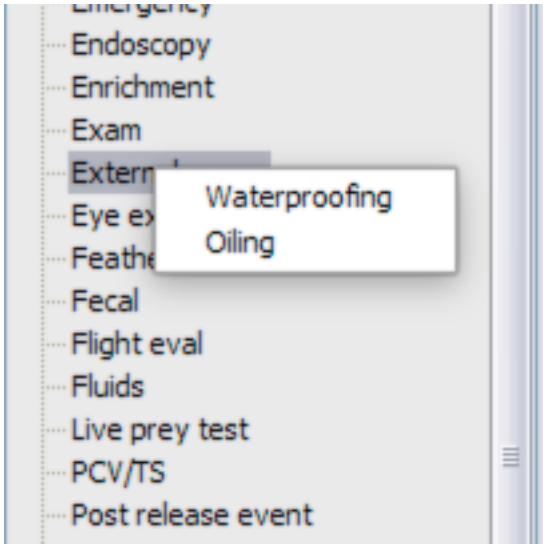
be made. If you click on a **+** mark, the location will be marked a selected (red arrow). You can then select the wound's size, severity and the amount of swelling by adjusting the corresponding slider controls. Your choices will be reflected by a "bull's-eye" symbol at the appropriate spot. The **size** slider determines the diameter of the bull's-eye symbol, the **wound severity** slider sets the *outer* color and the **swelling** slider sets the *inner* color.

You can make a record for a lesion at one or all of the locations specified by the **+** mark. When you are done, press the **Ok** button. The wound report will be saved and an image of the wound report will be captured and stored as a thumbnail as is the case with all other image attachments.

Wound reports and the associated image can be viewed, edited or deleted at any future date. Multiple wound reports can also be simultaneously in chronological order in the Historical Data Viewer.

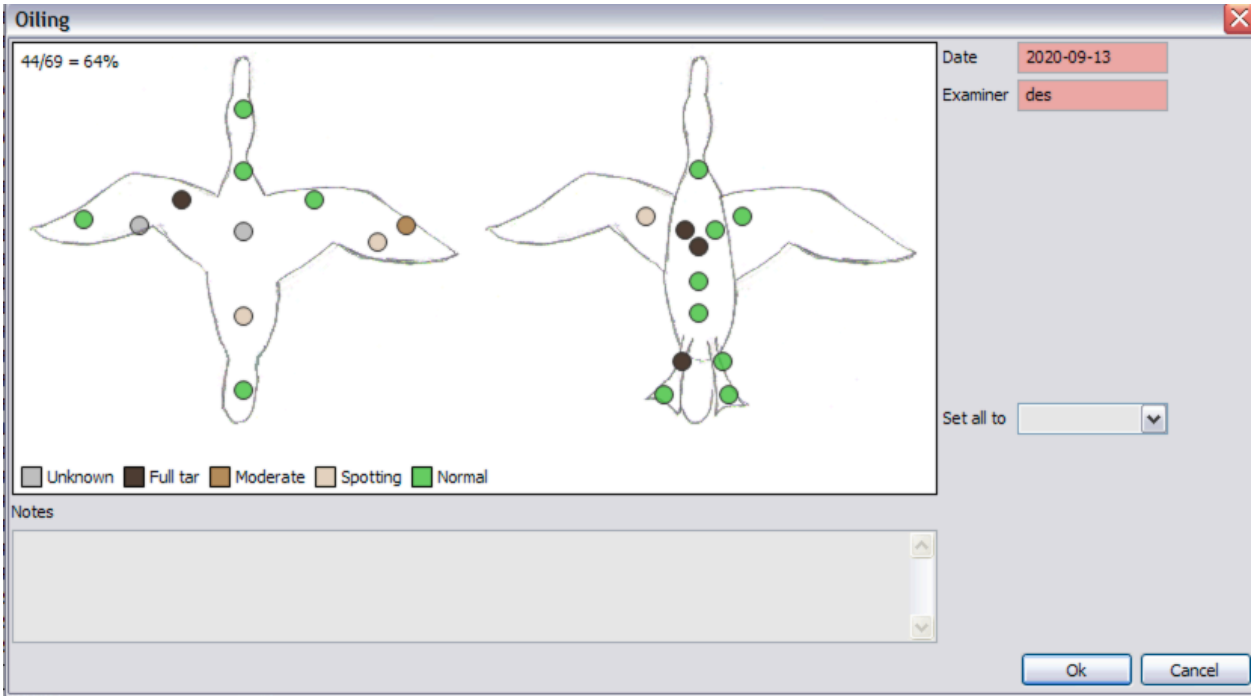
External examinations

External examinations are used to assign an objective score or value to various parts of an animal's external anatomy. They are commonly used to score feather damage in oiled birds or shell damage in turtles. To create an external examination, please contact customer support and we will assist in design the form.



External examinations are accessed by right-clicking on the **External exam** entry in the list on the left-hand side of the **Medical Record Entry** form. A list of available exams will be presented to choose from. After making a choice, the **External exam** form will be presented.

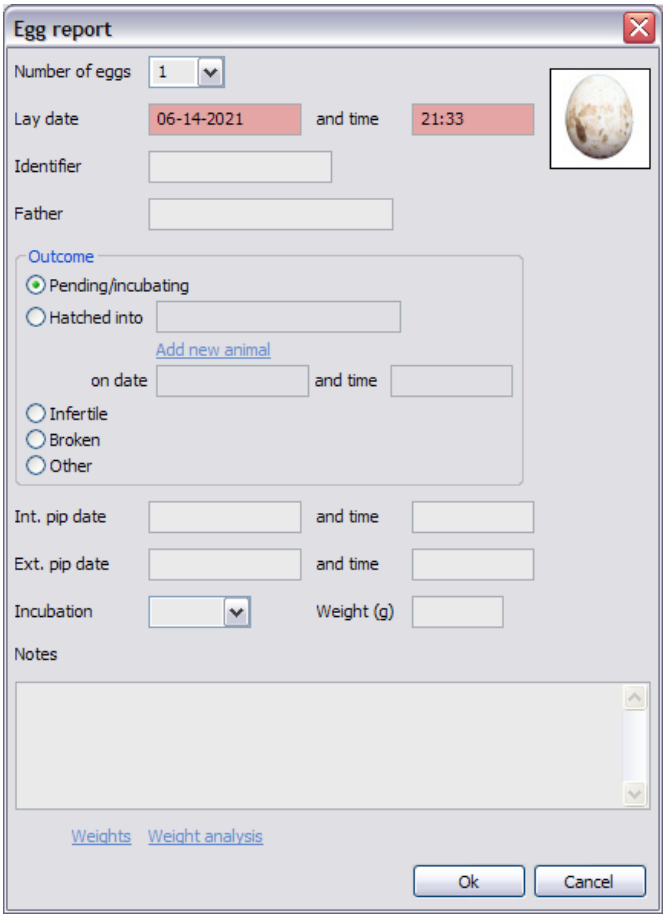
The form has a picture or pictures of the animal with various regions highlighted by a color value/score. You can right-click on each colored area to specify the score for that area. Each value is color-coded and a color key is displayed at the bottom of the graphic. As you specify values for each area, the total score is calculated and displayed at the top right. As with most entries, you must provide a date and the initials or name of the examiner and you can use the **Set all to** list to set all areas to a single value. There is also an optional field for extra notes.



Eggs

Egg records are created to tracked eggs that are laid and hatched. This data then automatically feeds into the **Egg Tracker** reports. The **Egg** function is available for all animals except those with sex of **M**, **MC**, **M?.**

To create a **egg record**, *double*-click on the **Eggs** entry in the list on the left-hand side of the Medical Record Entry form.



The **Egg report** form will appear. It allows you to specify the number of eggs, the date and time they were laid as well as the **Father**. The **Father** field will be automatically filled with the female's mate, if one is currently specified. **How to select a mate**. In addition, you can double-click in the **Father** field to choose from a list of conspecific animals (as described in the **Genealogy Tracker**). If the father is an animal that is not currently in the database, you can simply enter it's name or other identification.

The status can be:

- **Pending/incubating** - this the default.
- **Hatched** - If you choose this status, or change and egg to this status later, you should enter the id number of the resulting chick. In addition, you can press the "**Add new animal**" link to create a new animal. This new animal will be automatically linked to this egg.
- **Infertile**
- **Broken**
- **Other**

You can record the date and time for **pipping** (internal and external) as well as the **incubation type** (artificial vs. natural) and the **lay weight.**

The **Notes** field can be used to record any other details, especially when the **Status** is **Other**. Note that when you create more than one egg, you a free to go back and edit them later.

Click the **Weights** link to view and record subsequent egg weight during incubation. The **Egg Log** will appear and it displays your egg data. Press the **+** button to add a new weight, press the **-** button to delete the selected weight and double-click an entry to edit it. When you add or edit a new weight, you must specify a date and time and you can option record the relative humidity and a short notation.

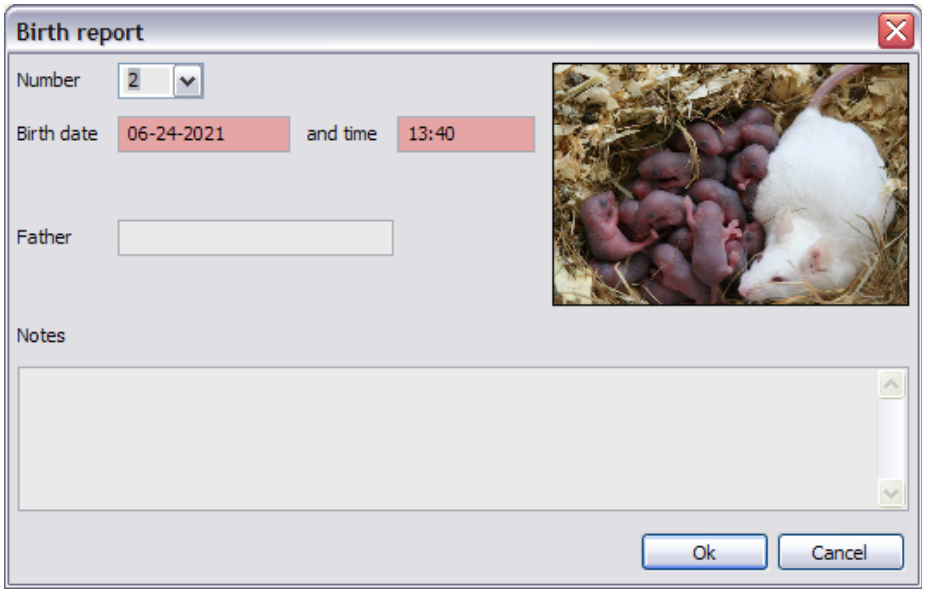
Press the **Weight analysis** link to view a incubation weight analysis report. In order to run this report, you need to have incubation parameters setup for this species. Specifically, the following species attributes must be configured in the **Species Editor**:

- Incubation low loss (%)
- Incubation high loss (%)
- Incubation low period (days)
- Incubation mid period (days)
- Incubation high period (days)

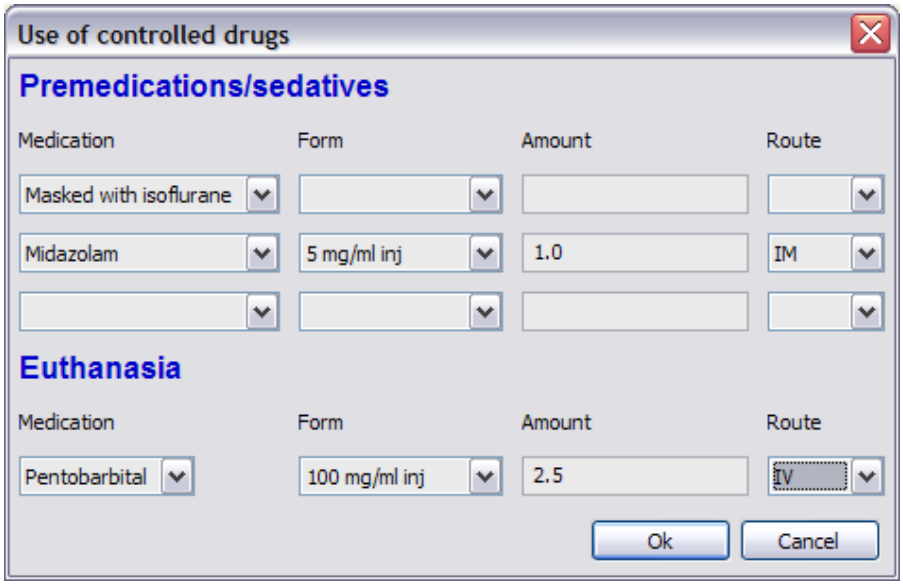
Births

This function is only available for female mammals. To create a **birth record**, *double*-click on the **Births** entry in the list on the left-hand side of the Medical Record Entry form.

The **Birth report** form will appear. It allows you to specify the number of newborn, the date and time they were born as well as the **Father**. The **Father** field will be automatically filled with the female's mate, if one is currently specified. **How to select a mate**. In addition, you can double-click in the **Father** field to choose from a list of conspecific animals (as described in the **Genealogy Tracker**). If the father is an animal that is not currently in the database, you can simply enter it's name or other identification.



Controlled drug usage
This function allows you to record the usage of controlled substances as well as to document a euthanasia with a premedication/sedative and a euthanasia agent. Select up to three premedication/sedatives and/or a medication/method of euthanasia. The choices for the premedication/ sedatives and euthanasia are configured in the **Edit List Choices** function under "Sedative" and "Euthanasia method", respectively.

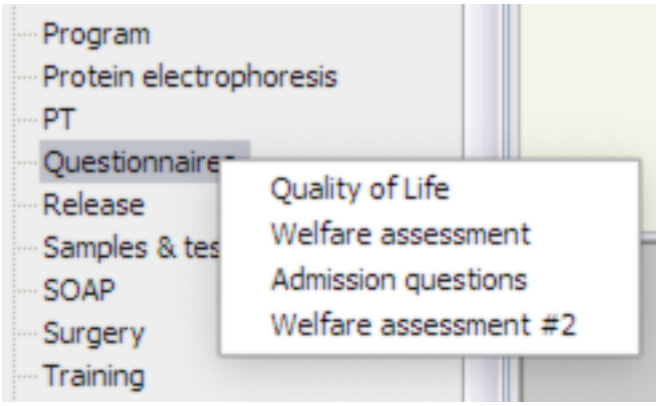


For choices that are actual medications, they must be entered in **Edit List Choices** exactly as they are entered in the **Medication Editor**. So, for example, "Pentobarbital" must be spelled the same in both places, and, if it is a controlled drug, then the **Controlled drug** checkbox should be checked in the **Medication Editor**. Once you have filled out the form, press **Ok** and an entry will be made in the animal's chart. The controlled drug usage will be automatically included in the **Controlled Drug Usage** report.

This **Controlled Drug Log** window can be used when making a new record entry for an animal and your system can also be configured to display automatically whenever an animal is euthanized. These records can also be used to generate an **Euthanasia report.** Contact customer service for enable this feature if needed.

Questionnaire
RaptorMed allows for use-defined questionnaires to be inserted into an animal's medical record. The questionnaires are accessed by right-clicking on the

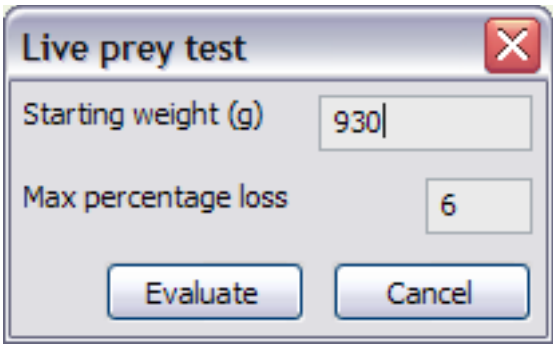
Questionnaire entry in the list on the left-hand side of the **Medical Record Entry** form. A list of available choices will be presented to choose from. After making a choice, the **Questionnaire** form will be presented.



Fill in the form and press **Ok** when done. Please contact customer service to help design your questionnaires. Each one can contain any number of questions with predefine choice lists and/or free-form edit fields. Answers can be textual or numeric and some simple statistics such as the average score can be automatically calculated for numeric-type questions.

Live prey test

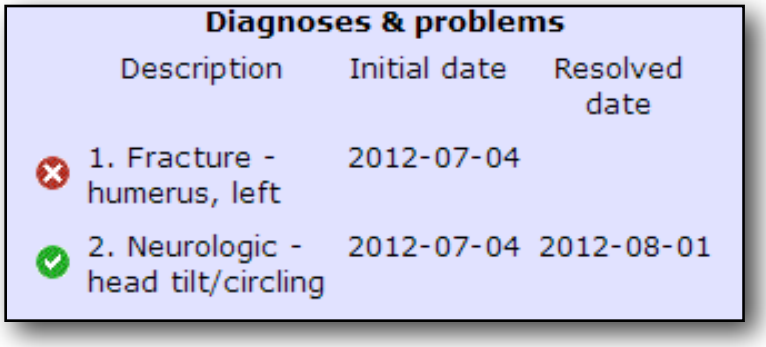
The **Live prey test** option helps you calculate the weight loss or gain after a live prey test. This is typically used for evaluating immature birds of prey. To use this feature, enter the most recent weight in the **Medical Record Entry** form. Presumably, this is the bird's weight just after the test is complete. Double-click **Live prey test**. A small form will appear in which you enter the bird's **weight** at the ***start*** of the test and enter a maximum allowed **weight loss percentage** in order to pass the test (a default value is pre-programmed into the system and this value can be changed if needed). Press **Evaluate** and a summary of the weight gain or loss will be inserted into the record.




```
Live prey test results: starting weight = 930 g, final weight = 950 g
     Gained 20 grams -> PASSED
```

Problems

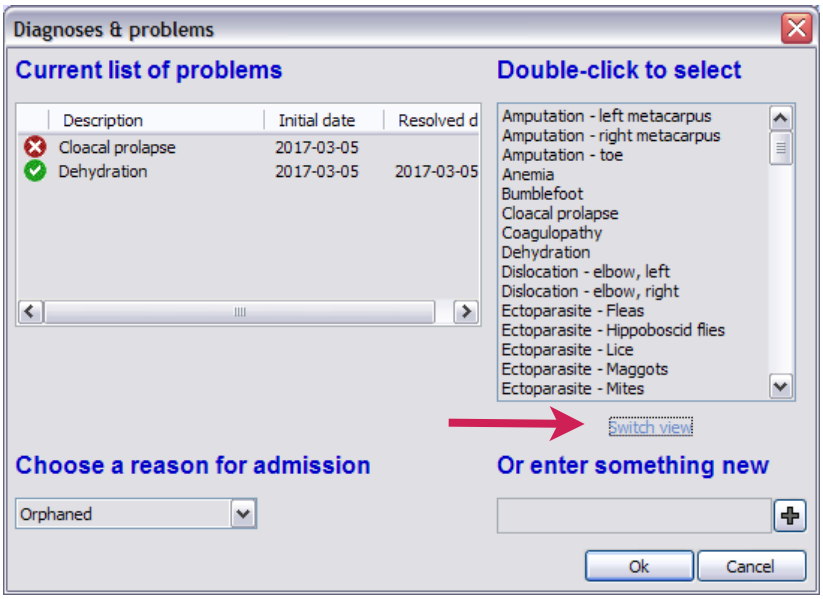
You can maintain a problem list for each animal. This list is displayed on the animal's main chart at the top in the **Summary** area. Problems can be added and removed. An initial and end date can be specified and you can mark if a problem has been resolved. A **green** check indicates that the problem is resolved while a **red** x indicates it is still an issue. If no problems have been identified, then "NO PROBLEMS RECORDED" will be displayed.



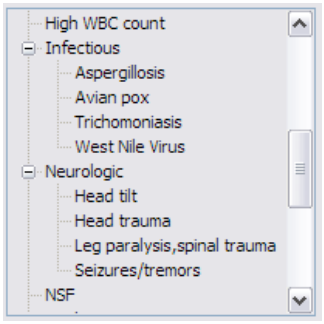
To add or edit problems, click on the **Problems** link in the **Action Bar**.

The current list of problems is displayed to the left. You can right-click on an existing problem to remove it, set the initial or resolved dates or to switch its status. When a problem is marked as resolved, the **Resolved date** is automatically set to the current date.

You can add a new problem from a list of pre-configured problems by double-clicking on any of the entries in the list to the right. If there is a



problem not currently in the list that you would like to add, just enter it in the edit field in the lower right and press the **+** button.



The choices can displayed in a simple alphabetical ordering or you can switch the view (**red** arrow in previous screenshot) to switch to a hierarchical tree view. In this view, like problems are listed together as is shown in the example to the right. This can be very useful, especially when trying to select from a very long list. In order to take advantage of this feature, you should create problem choices that are of the following form:

```
CATEGORY - CHOICE
```

So in the above example, “Infectious” is a category and “Aspergillosis” is a choice. The category and choice must be separated by a dash.

There are few problem choices that have special meanings:

- **Toxin - Lead** - Be sure to use this choice for all confirmed lead poisoning cases as this information is used in optional Part E of the US FWS year-end report.
- **Orphaned** - Be sure to use this choice (and only this choice) for all healthy orphans as healthy orphans are reported differently in the Bandit report that goes to the US Geologic Survey when reporting birds that are released with official federal bands. Note: since this is a “normal” condition and not necessarily a true problem, these entries are marked as “resolved” with a **green** check when added.
- **orphan** - For the Washington state year-end report, make sure that this word appears in at least one problem associated with each orphan patient.

The system can be configured to treat various problems as “non-problems” and will mark them as resolved with **green** check mark instead of a **red** X when added. This is useful when you want to record various issues and conditions such as “Orphaned” that really are not true problems. Please refer to the Technical Reference Manual for more information.

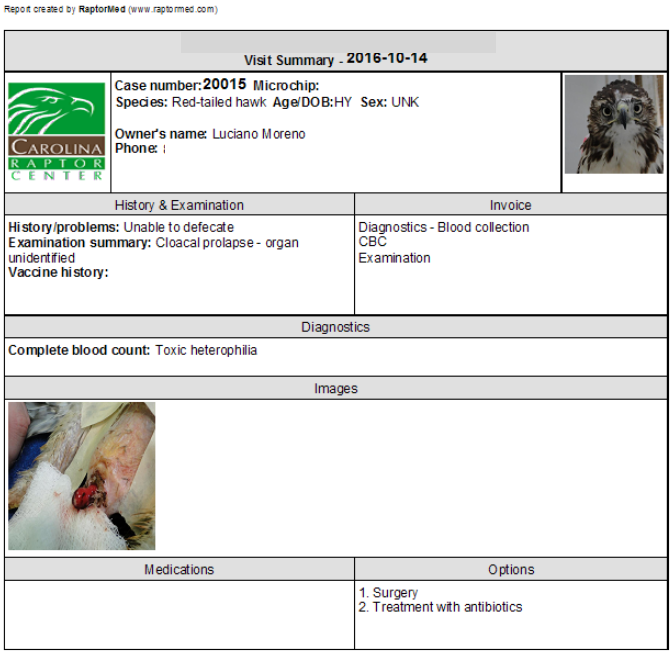
You can also choose the **Reason for Admission** from a list of pre-configured choices. There are a few choices (such as gunshot) that are considered illegal causes of injury by the US Fish and Wildlife Service (USFWS). When one of those choices is selected, a **reminder** will automatically be created to remind you to notify the USFWS. In addition, the patient will be marked as “**Do NOT release where found**”.

The system can assist you in sending an automated update email to USFWS when there is a patient admitted as a result of an illegal cause of injury. Click here for more information.

The Visit Summary

If enabled on your system, you can generate a **Visit Summary** report. This report is accessed by clicking on the **Summary** link that will be present at the top of all **New Visit** entries in the animal's medical record entry. This summary is most useful for and is designed to present to a customer after a new visit as in the case of a typical for-payment veterinary clinic or falconry hospital. The summary gathers together the following bits of data:

- Animal info and client name
- The animal's id photo
- History and examination findings
- The current items on the invoice
- The diagnostics already performed
- Thumbnails of any imagery captured during the exam.
- The prescribed medications
- Options for future treatment.



Report created by **RaptorMed** (www.raptormed.com)

Visit Summary - 2016-10-14

Case number: 20015 **Microchip:**
Species: Red-tailed hawk **Age/DOB:** HY **Sex:** UNK

Owner's name: Luciano Moreno
Phone: ¡

History & Examination	Invoice
History/problems: Unable to defecate **Examination summary:** Cloacal prolapse - organ unidentified **Vaccine history:**	Diagnostics - Blood collection CBC Examination

Diagnostics

Complete blood count: Toxic heterophilia

Images

Medications	Options
	1. Surgery 2. Treatment with antibiotics

Chapter 3

Individual treatments
Group treatments
Printing treatment sheets
Enclosure logs and treatments
Reminders
Favorites

Treatments

You must specify a treatment/feeding plan for each animal. Each day, treatment sheets are printed and the appropriate treatments are printed based on the date and the time of day. It is not uncommon to print sheets multiple times a day as a animal may need different care in the morning compared to at night. It is also very common for a treatment plan to change during the day and for patients to be moved to a new location. An animal either has an **individual** treatment or is part of a **group** treatment.

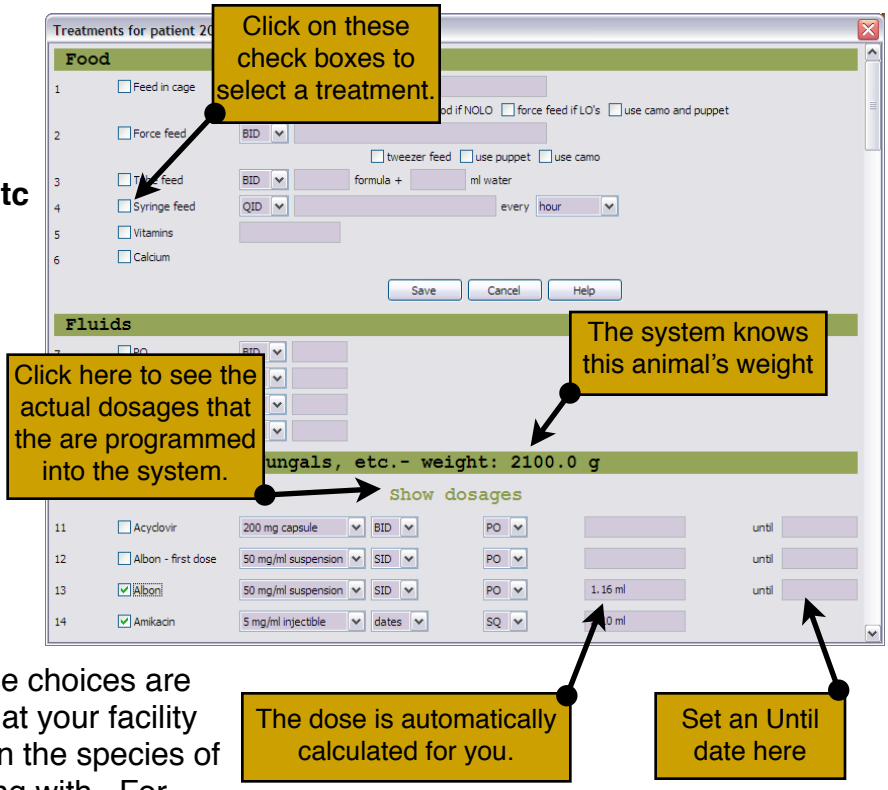
All active patients must have a valid location and treatment plan.

Individual treatments

All patients kept in an inclosure by itself will use its individual treatment plan. This treatment plan is accessed via the **Treatments** link in the **Action Bar** at the top of the patient chart.

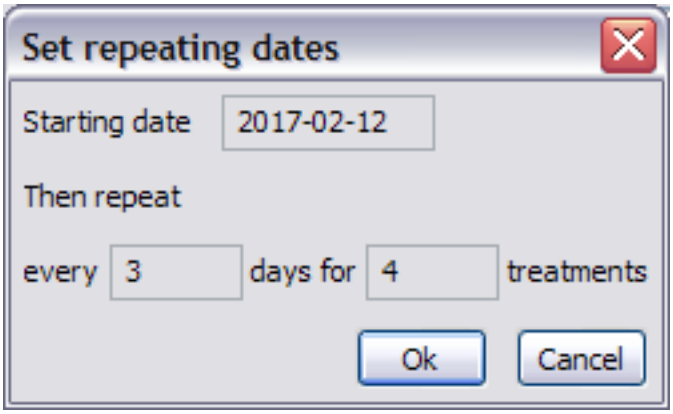
The **Treatment** form appears and it has the following main categories:

- **Food and water**
- **Fluids**
- **Enrichment**
- **Antibiotics, anti-fungals, etc**
- **Analgesics, NSAIDs, etc**
- **Eyes**
- **Ears**
- **Other meds**
- **Vaccines**
- **Miscellaneous** - radiographs, blood collection, surgery, physical therapy, bandage changes, clinician consults, etc.



Each section has many different choices and these choices are configurable based on what your facility needs as well as based on the species of the animal that you working with. For example, a fish or turtle would have different treatment options than a mammal. Therefore, your screen may differ in appearance than what is shown here. The medication choices are configurable using the Medication Editor and all the other choices are configurable using the Treatment Options Editor.

Each choice has a check box that allows the treatment to be selected. In general, each treatment may have a frequency list to allow you to select how often (i.e. SID, BID, TID, etc.) the treatment needs to be done. There may also be options for setting specific dates or for setting a date to continue the treatment until. Remember that you can double-click in any date field to bring up a calendar date picker. Many drugs allow you to enter multiple future dates. You can enter each one manually by typing in the date or by using the calendar date picker in each field.



You can also auto-set the dates by right-clicking on any one of the date fields and choosing **Set dates on interval**. A small window will appear that allows you to set the **start date**, the **number of dates** and the **interval in days** between dates. When you press Ok, the date fields will be automatically filled in.

If the treatment option is a medication, the dosage will be automatically calculated when you check the corresponding checkbox if the animal's weight has been entered and if your formulary contains a dosage for this drug. See the **Medication Editor** for more information.

If "**Dilution**" is an option for the medication **Form** and it is selected, the **Dilution Calculator** will be displayed that allows you to calculate an appropriate dilution from a stock solution. This is useful when you need to administer a small dose to a small animal. In addition, each medication may have an optional Notes field that allows you to specify additional notes about each medication (such as how to prepare or administer it).

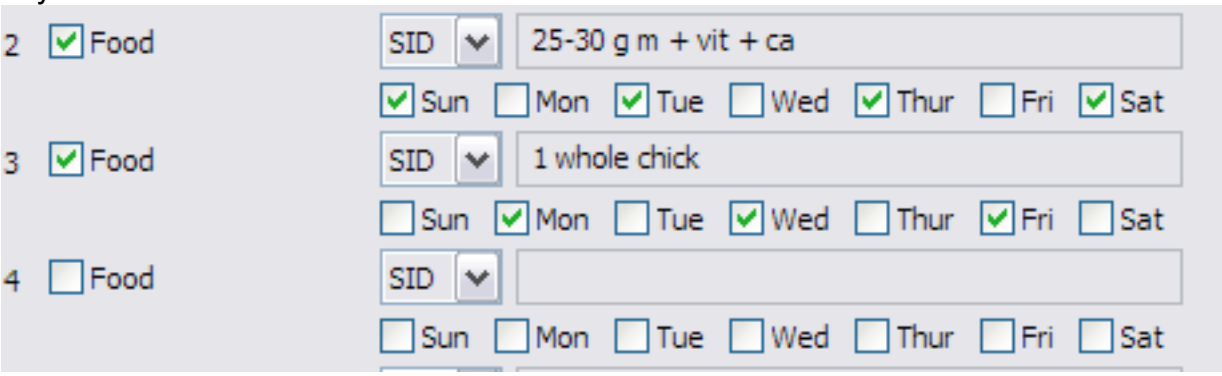
The system can be configured to automatically re-calculate all drug dosages when a new weight is entered.

In the **Food and water** section, there a many different options for feeding, including leaving food in the enclosure (**Food**), force feeding (**Force feed**), tube feeding (**Tube feed**), **Formula**, etc. For most options, you can simply type in the details of the diet. For the first **Food** option, you may also be able to choose from a list of pre-defined diets that are appropriate for the particular species. Please contact customer support for details. There is also an option for providing water in the enclosure and you can choose

the type of water as well as additional notes. The choices the the type of water can be configured in List Choices (choose the **Drinking water** option).

If enabled on your system, **Formula** can be specified as % of body weight and the system will auto-calculate the correct volume.

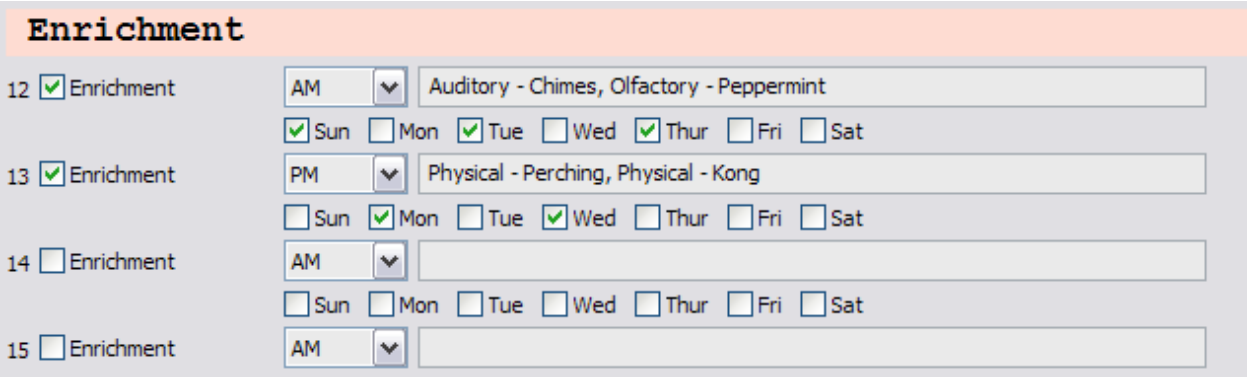
For additional flexibility, the option to specify a different meal each day can also be enabled. There are entry fields that can be selected that allow different meals to be specified on one or more days. In the following screenshot example, one meal will be provided on Sun, Tue, Thur and Sat and another meal will be provided on the alternate days.

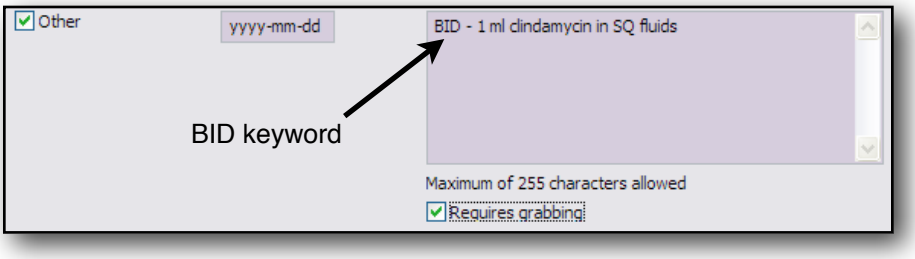


There is also an option called **NPO** which stands for “nothing per os”. This means that nothing is to be given orally and is usually used on surgery days so that a patient is not fed before anesthesia. If this option is checked, then all food entries will be ignored on the specified days.

In the **Fluids** section, there is also an option called **Periodic** which allows you to specify that fluids be administered on specific dates rather than one or more times every day.

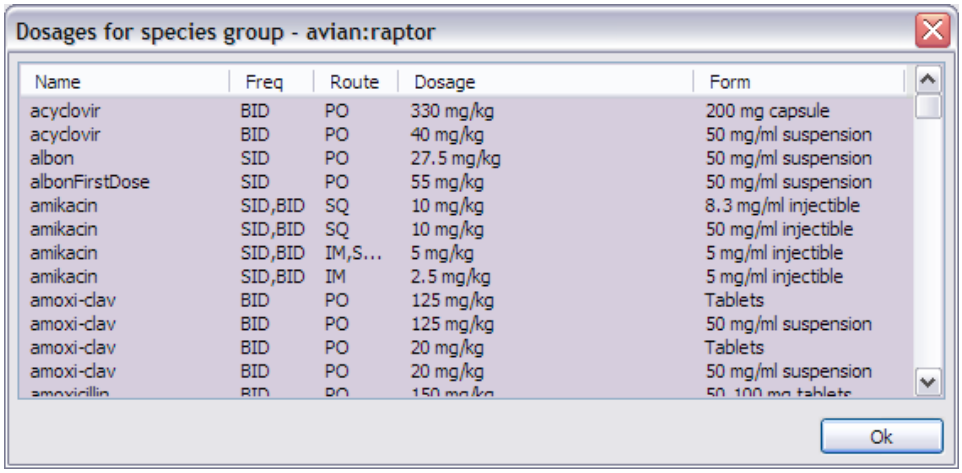
The **Enrichment** section allows enrichment activities to be scheduled for each day of the week. The time of day can be selected (AM, Midday, PM, All day) and you can type in a description of the enrichment activity or double click and choose from the **Enrichment selector**. See **Enrichment** for more details. Enrichment planned in this way will be displayed on the **Enrichment schedule calendar**.





There is a special field called **Other**. This field is used to schedule a treatment that isn't already built-in to the system. By selecting this option, you can enter any custom text describing the treatment. You can either enter a specific date in the date field or you can put the SID, BID, TID keywords in the actual text description to program a treatment that is to be performed at least once or more times per day. The **Requires grabbing** is used to indicate if the patient needs to be handled in order to perform this treatment.

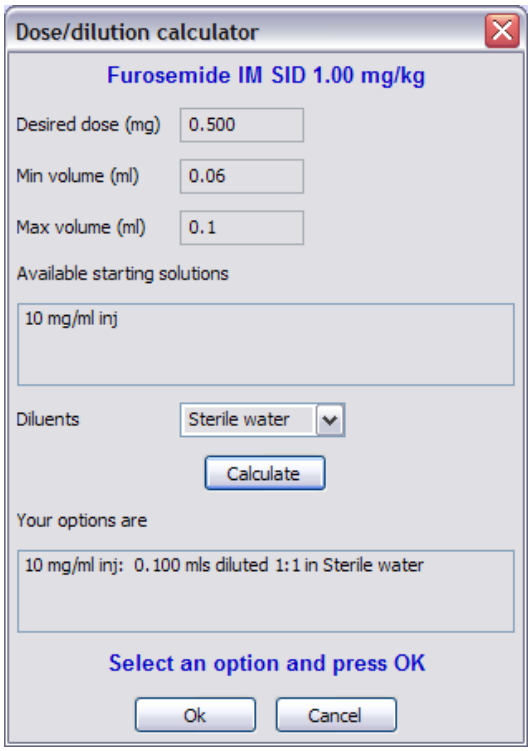
Click the **Show dosages** link to view the dosages that are being used by the system for this patient. The dosages are taken from a formulary that has been configured for the animal's species group. There can be any number of individual formularies. For example, animals in the **avian:raptor** species group may use a different formulary than animals in the **mammal:rodent** species group. See the **Medication Editor** for more information.



If enabled, the system will auto-insert a summary of the treatment plan into the medical record after the treatment has been modified and saved.

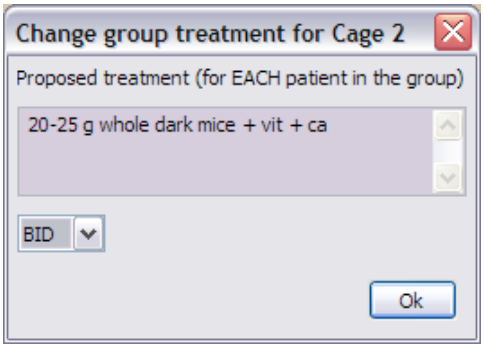
Dilution Calculator

The Dilution Calculator is used when you need to administer a very small dose to a small animal. When a medication is selected and the **Form** that is chosen is "**Dilution**", the Dilution Calculator is opened. It shows the drug name, route, the dosage (mg/kg) and it auto-calculates the desired dose (mg). There are fields for you to specify the minimum and maximum volumes that are possible and this is important as small animals cannot take an injection larger than a certain volume. The available stock solutions to start with are also displayed. Choose a **Diluent** and press the **Calculate** button. All dilution options will be presented. Choose one and press the **Ok** button. The chosen option will be inserted into the treatment plan.



Group treatments

When a patient is part of a group of two or more animals, the treatment/feeding will be specified by a **group** treatment plan. In these cases, the animals are usually on more of a maintenance-type plan where individualized treatments are no longer required. To create or edit a treatment plan for a group, right-click on the enclosure/location in the **Enclosure** list on the main screen. Choose **Edit group treatment** from the popup menu. Press the **Yes** button when prompted if you want to proceed. A window will appear that allows you to enter the treatment plan and to select the frequency (i.e. SID, BID, etc). Note that the treatment plan that you enter is for **EACH** animal in the enclosure.



So, for example, you may have an enclosure with three screech owls. The plan may call for 25 grams of mouse daily for each animal. This exact plan and the number of animals will be printed on the daily treatment/feeding sheets. You must realize that the enclosure actually requires **25 x 3 = 75** grams since there are three birds.

Press the **Ok** button when complete. You can always go back and edit this treatment plan later.

If an animal that is in a group needs a special treatment, there are three ways to accomplish this:

1. Use a reminder. Reminders can be added for a patient to schedule a procedure or treatment. They can be scheduled for a specific day or set to repeat daily until turned off. Click here to see how to setup a reminder.
2. Mark the patient as "**Feed separately**". This will tell the system that, even though this patient is in a group, the patient's individual treatment plan should be used. Click here for more information about setting this option.
3. You can set up a ***virtual*** cage. For example, if there are 2 animals in CageA and they need to be treated individually, you can create CageA-1 and CageA-2 and move each animal into one of them. You, of course, realize that they are actually the same enclosure but this "tricks" **RaptorMed** into thinking they are individuals. In this case, each animal's individual treatment plan will be printed out separately on the daily sheets.

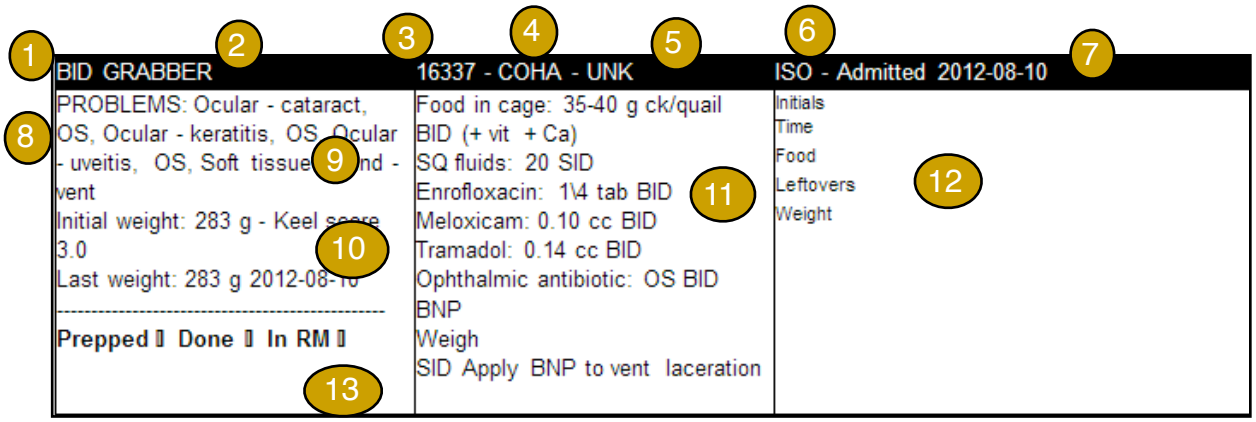
Currently, if one patient is marked as **Feed separately**, then all patients in the enclosure must also be marked as such.

Printing treatment sheets

The treatment sheets that print out are designed to provide a clear and concise synopsis of the patient and the treatment that has been planned for it. The actual format of the sheets that are printed have been customized for your facility so they may be different that what is shown in this example. The following areas and pieces of information may be available on your sheets.

1. How often does this patient need to be treated each day?
2. Does the patient need to be grabbed in order to perform the treatment? The system automatically determines this from the treatment plan. This is helpful as you can utilize less experienced staff and personnel for the "non-grabbers" and use your more experience people for the "grabbers".
3. The patient id
4. The species
5. The age
6. The current location
7. Admission date
8. The problem list
9. Other important notations
10. Weight history
11. The treatments that are required
12. An area to jot down notes

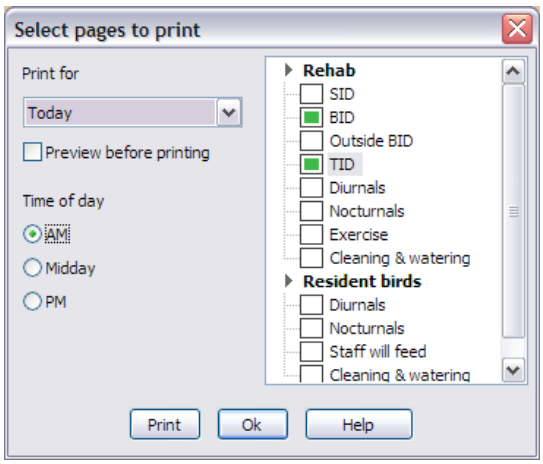
13. Check boxes to indicate that the treatment is done. There is a checkbox to indicate the treatment was prepped, one to indicate it was actually performed and one to indicate if it was recorded in **RaptorMed**.



To print treatment sheets, choose **Tools ▶ Print treatment sheets** from the main menu. A window will appear that allows you to choose which sheets to print, if you want to print for today, tomorrow or any future date and it allows you to preview the printout before printing. The actual appearance of your print selection form may vary as this feature is customized for your facility.

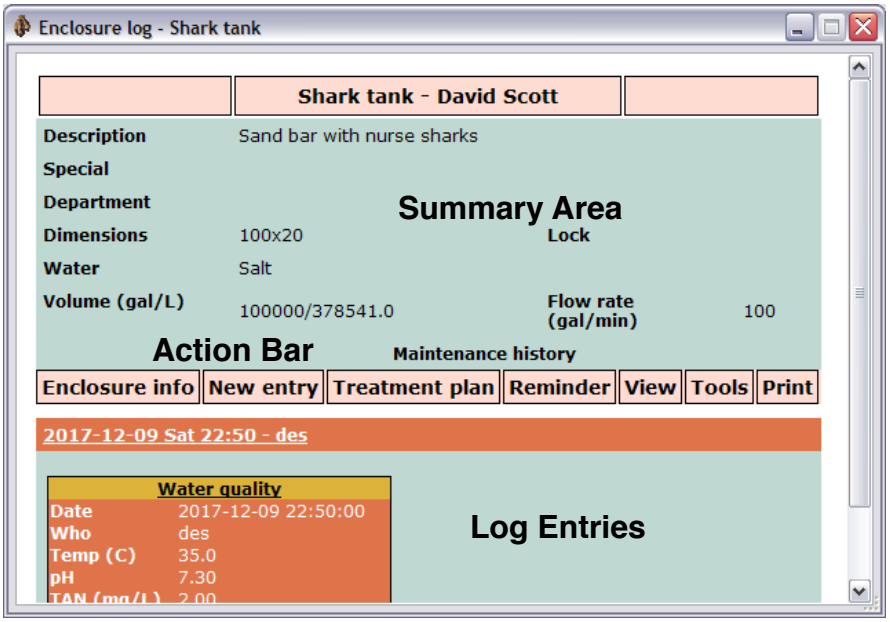
Note that it is good practice to print sheets for the next day at the end of each day. This insures that you will have your treatment sheets ready the next morning. You can never predict when you may have a printer problem or power outage so it is strongly encouraged that you print your sheets as part of your end-of-day procedure.

The **Preview** option is helpful in that you can preview the treatments for a future date to help get an idea of how busy the day will be.



Enclosure logs and treatments

Treatment plans for an entire enclosure can be setup and recorded in an enclosure log. When an entry or treatment is recorded, a duplicate entry can also be made in the individual chart for each animal in that location. This function is more versatile than the standard Group treatment function described above and is designed for organizations like aquariums that need may have complicated treatment and or feeding plans for their various enclosures. In general, you should use either the enclosure logs or the group treatments as there is not much reason to use both simultaneously.



To access the enclosure log, right click on an location and select **Enclosure log**. The enclosure log screen will be displayed. It has a **Summary Area** at the top that includes various attributes and details for aquatic systems as well notations on when various maintenance and cleaning functions were performed. There is an **Action Bar** has the following commands

- **Enclosure info** - view edit the properties of this enclosure. See **Enclosure Editor** for more information.
- **New entry** - create a new log entry.
- **Treatment plan** - view and edit the treatment/feeding plan
- **Reminder** - add a new reminder
- **View**

  Reminders - view/edit existing reminders.

  Env conditions - view the environmental conditions data in a tabular or graphical form.

Water quality- view the water quality data in a tabular or graphical form.

Options - filter to log to view only specific kinds of entries.
Special entries - view and jump to specific special entries.

- **Tools**
  Search for text in the log

  Maintenance log - if enabled, this allows you to access the **Advanced enclosure log maintenance** function. See below for more information.

- **Print**
  Entire record

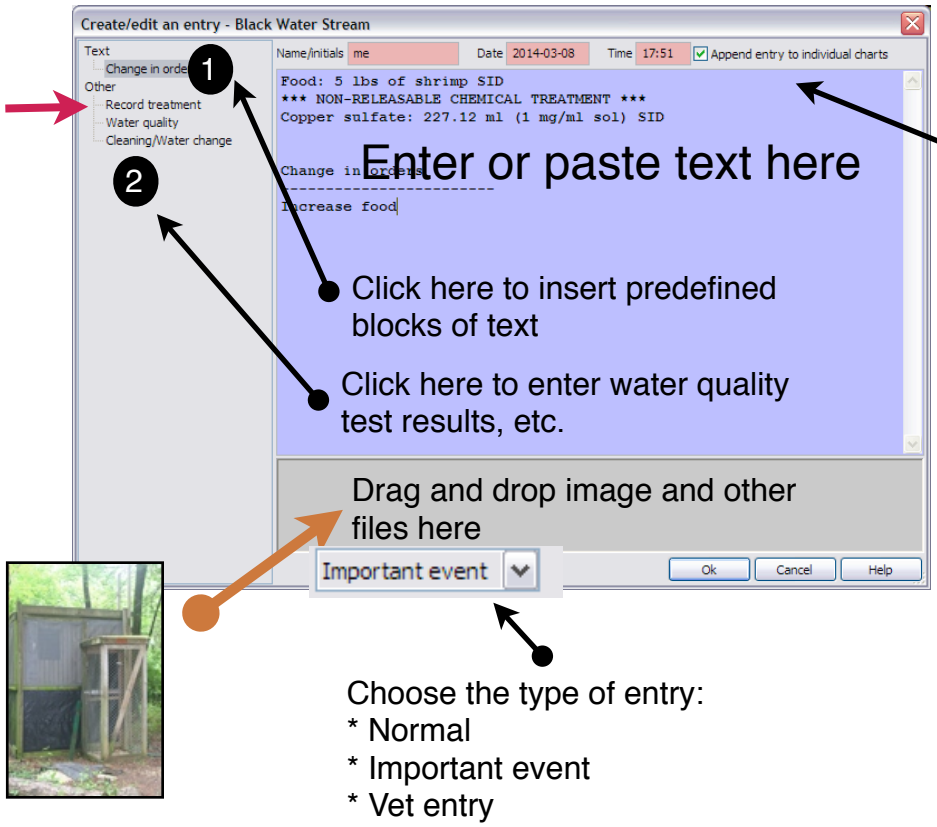
  Enrichment schedule - Prints the enrichment calendar. All enrichment activities scheduled in the enclosure's treatment plans as well as any reminders of category **`Enrichment`** will appear on this report.

- **Print Husbandry Plan** - this creates a report that summarizes the animals in the enclosure and then prints out a log sheet for the next 90 days that specifies what need to be done each day. It also includes any reminders and has an initials area to be signed off each day.

The actual log entries are listed below the **Action Bar** with the most recent entry displayed at the top.

Adding an enclosure log entry
To add a new log entry, press the **New entry** menu. A form will appear that is very similar to the one that is used to create a new individual animal record entry.

You can enter any amount of text in the main text area or you can cut and paste text in from any other application.



Double-clicking on any of the entries in **Area 1** will automatically insert a predefined block of text. This is useful to quickly enter text that is used repeatedly. The list of choices in this area is configurable and can be changed at any time. See the Text template editor for more information.

Double-clicking on any of the entries in **Area 2** allows you to enter lab results, treatments and many types of other data. See below for more information. You can also access custom, user-defined data entry forms. Contact customer service for help in creating forms.

Double-clicking on the **Record treatment** item in **Area 2** (the **red** arrow in the picture) will automatically insert the enclosure's complete treatment plan into the record. This includes everything that was specified in the treatment plan as well as drug concentrations and amounts. All you have to do is modify it to match what was actually done. This allows you to make a very accurate and complete entry in almost no time at all.

Any file can also be dragged onto the form and added as an attachment. For image files, the JPEG file type is recommended. Other file types, such as Word or Excel files or other image file types can also be dragged and dropped onto the enclosure log. For more information on importing image and document files, look here. Also note: instead of dragging and dropping a file, you can also right-click in the drop area and choose **Browse for a file**.

Entering an animal's id number in square brackets like this:

`[2017-2345]`

creates a hot link that you can click on to open that animal's record

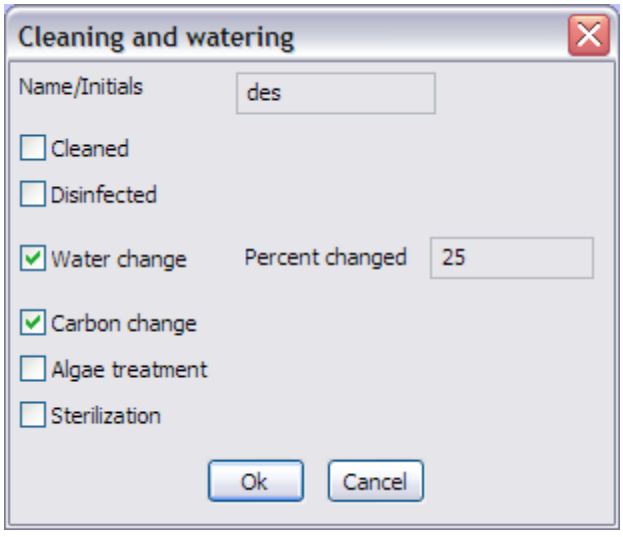
The **Entry type** field is useful in order to designate some entries as more important or special in some way. Using **View Options**, you can filter the display to only see certain types of entries.

The following macros can be used in any record entry. They will auto-expand once the record is saved. They must be entered in square brackets.

`[USERNAME]` - use this to auto-insert the full name of the currently logged on user.
`[TIMESTAMP]` - use this to enter the current date and time.

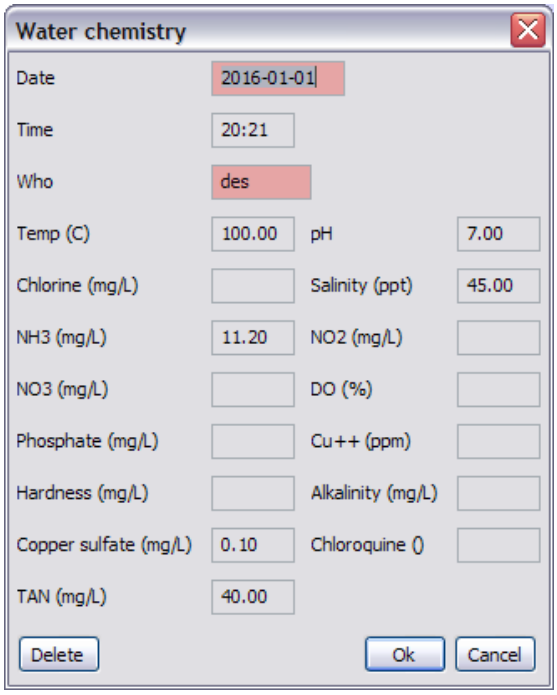
Recording enclosure maintenance

To record that an aquarium/system has been cleaned or disinfected, double-click on **Cleaning/water change.** A form will appear that allows you to select what was done (cleaned, disinfected, carbon change, etc) and to specify the amount of water changed as a percentage of the entire volume. Enter the initials or name of the person responsible for the work and press **Ok** to append this to the enclosure log. Note: if the **Advanced Enclosure Maintenance Log** function is enabled, (see below), then this command will **not** be available.



Recording water chemistry tests

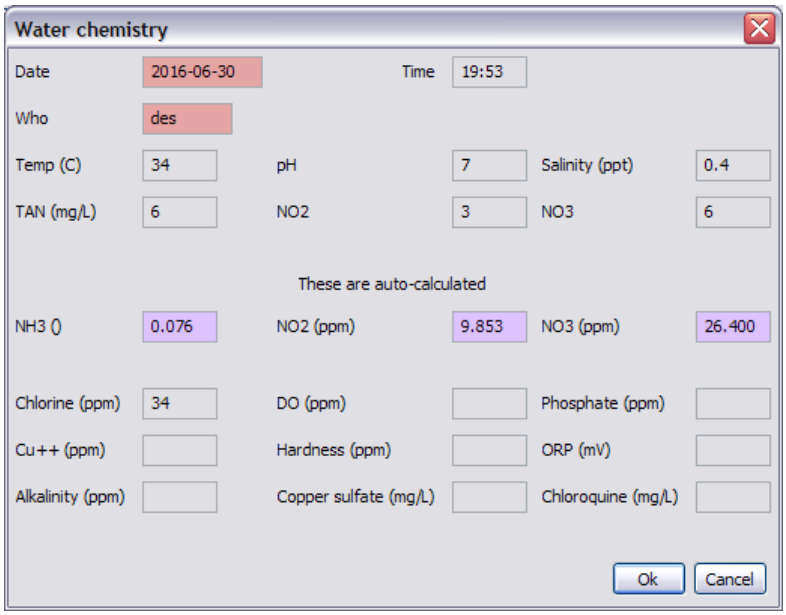
To record a water quality test, double-click on **Water chemistry**. A form will appear that allows you to enter values for many different parameters. The actual parameters that are listed depend on how your system is configured. In addition, the measuring units and what is considered a “normal” range can be set for each parameter. Press **Ok** to save this data into the enclosure log. All the water quality data can be viewed and graphed as described below.



Temperatures can be entered in either Celsius or Fahrenheit. You can specify the unit by appending a **C** or an **F** after the numeric temperature. If neither letter is used, the system assumes the unit that is set up as the default.

Also, dissolved oxygen (DO) can be entered with a **%** or **ppm** suffix and the value will be converted to the desired units automatically.

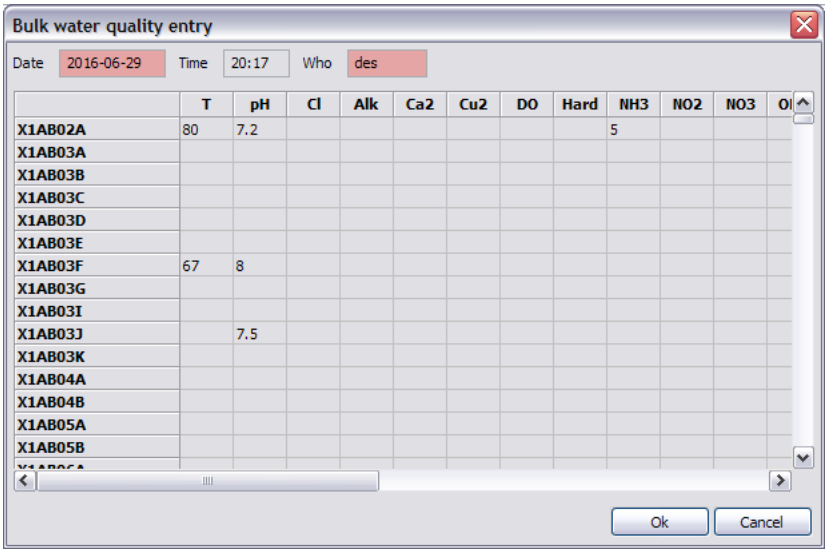
Depending on your configuration, you may have a customized form that can auto-calculate various parameters. For example the form shown at the right has lavender-highlighted fields that are automatically calculated based on the values entered in the fields near the top. This can be a big time-saver as these calculations can be quite complicated in some instances.



Note: you can enter test results for multiple enclosures at once using the **Bulk water quality entry** tool.

Bulk water quality entry

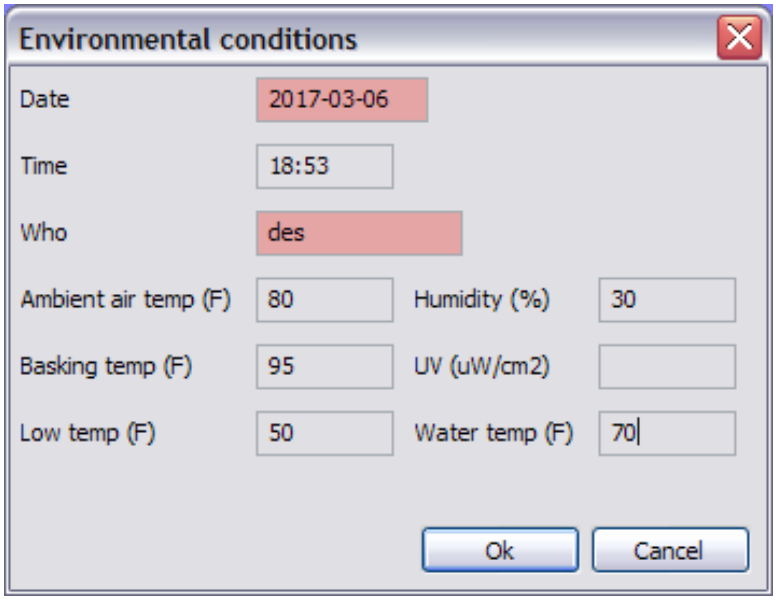
This tool is accessed by choosing **Tools ▶ Multiple enclosure water quality entry** from the main menu. A form is displayed that allows you to entry water chemistry data for any number of systems. Only *aquatic* system are listed. Enter the appropriate data, enter a date, time and the name of the person responsible and press the **Ok** button. You do not need to enter data in each test column and entire rows can be skipped. Only enter the data that was recorded and needs to be saved.

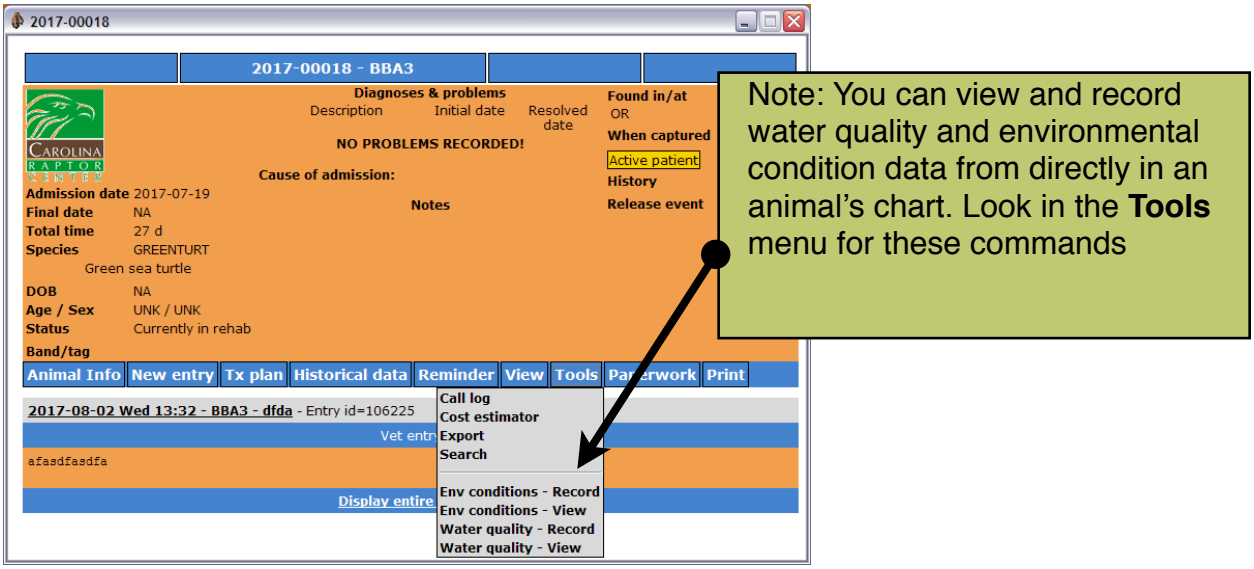


Recording environmental conditions

Click on this link to record measurements for various conditions such as air temperature (ambient, basking, low), water temperature, humidity as well as UV light levels. A form will appear that allows you to enter values for many different parameters. Press **Ok** to append this to the enclosure log. All the environment condition data can be viewed and graphed as described below.

Temperatures can be entered in either Celsius or Fahrenheit. You can specify the unit by appending a **C** or an **F** after the numeric temperature. If neither letter is used, the system assumes the unit that is set up as the default.





Linked enclosures

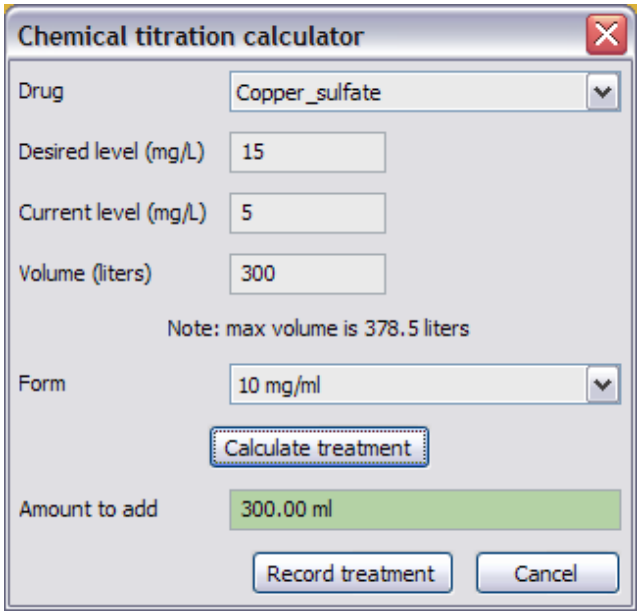
Some enclosures or systems may be physically separate but share a common water supply. This is typical in aquarium settings. In these cases, it would be nice to be able to make a record of maintenance, water changes, etc in the chart for one system and have

that record be reflected in all the systems. This is possible by “linking” systems to together. In order to do this, choose what will be the “primary” system. Then in the **Enclosure Info** section, edit the **Enclosures linked to this one** field and enter the names of all the linked systems. See **Enclosure editor** for more information.

Once enclosures are linked, any record entries including attachments, water quality records, environmental condition records, and maintenance log entries that are saved in the primary enclosure’s log will also be saved in the log for each linked enclosure.

Chemical titration calculator

This tool can be used in aquatic environments to auto-calculate the amount of a certain chemical in order to raise it from the current concentration to a desired concentration. It takes into account 1) the volume of the enclosure/system, 2) the last measured level for the drug or chemical in question 3) the selected concentration of the raw stock to be added and 4) the desired concentration.



To use this tool, select the chemical from the **Drug** list. The desired level is automatically filled in with the value specified in the formulary. The current level will be filled in automatically with the last available recorded level for the chemical in question.

The **volume** field is blank initially and the maximum volume for the enclosure/ system is printed. Enter a volume that is less than or equal to the maximum volume then select a concentration from the **Form** list.

Press the **Calculate** button and the volume of chemical to be added will be displayed. To record this calculation/treatment, press the **Record treatment** button and an entry will be made in the enclosure’s log. If current level of the chemical in questions is already at or above the desired level, the calculator will indicate this and an appropriate message will be appended to the enclosures log.

Insert animal list

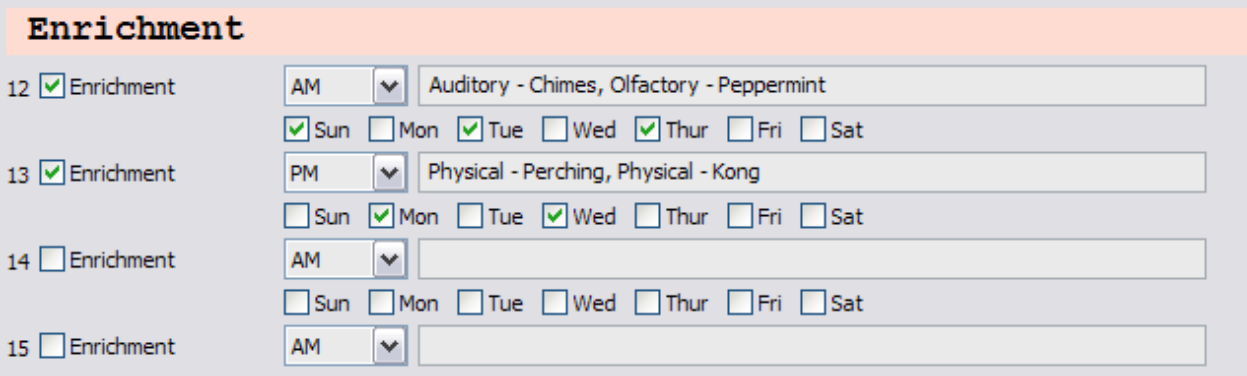
This command will automatically append a list of the animals in this location into the currently open log entry. The id number, band/tag information, name, age and sex will be inserted for each animal. This command is useful when you need to make an observation about each animal as this provides an easy placeholder or starting template

of text for the entry. Note that the animal id's are surrounded in [ ] brackets and are therefore hotlinks that can be used to jump to another animal's record.

Creating an enclosure feeding/husbandry/treatment plan
To setup the feeding/treatment plan for an enclosure, press the appropriate link. Depending on how your system is setup and what type of user is logged in, this link may say **Treatment plan,** or **Feeding & Husbandry** or something similar. The Feeding/ treatment plan form will appear that allows you to specify various types of food, medications and miscellaneous things like water changes and chemistry tests.

The **Food** section allows the diet to be setup in many different ways. For example, you can choose to provide a different meal on each day of the week and you can schedule multiple meals per day.

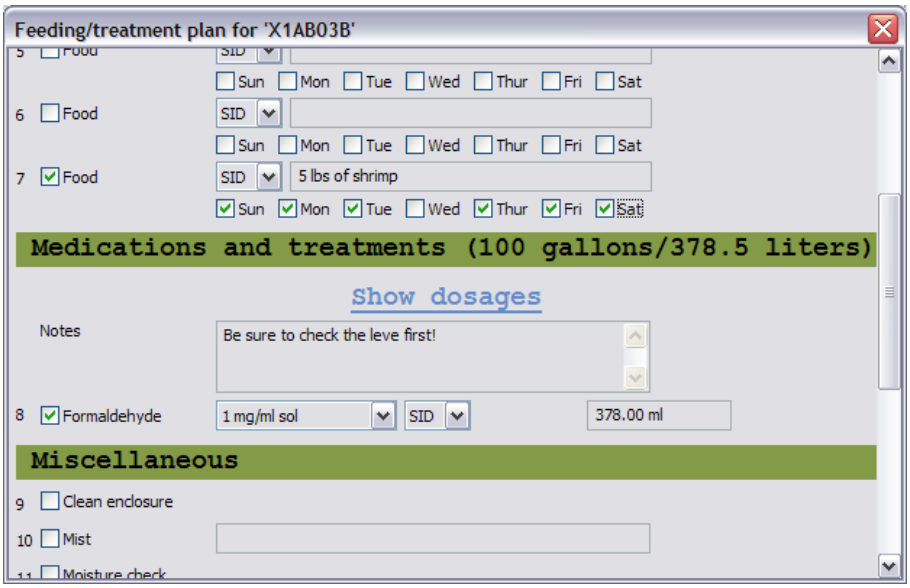
The **Enrichment** section allows enrichment activities to be scheduled for each day of the week. The time of day can be selected (AM, Midday, PM, All day) and you can type in a description of the enrichment activity or double click and choose from the **Enrichment selector**. See **Enrichment** for more details. Enrichment planned in this way will be displayed on the Enrichment schedule calendar.



The **Medication and treatments** section is used for aquatic enclosures to setup and schedule various medication and chemical treatments. In the medication section, the volume of the enclosure is displayed and you can click **Show Dosages** to see what chemical treatments are currently in the **Enclosure Formulary**. There is also a **Notes** section that allows you to enter additional instructions.

The **Miscellaneous** section allows you to schedule various things like sunning, misting, and water changes. For aquatic systems you can also schedule water chemistry tests. There is an **Other** category that allows any type of random task to be performed. **Other**

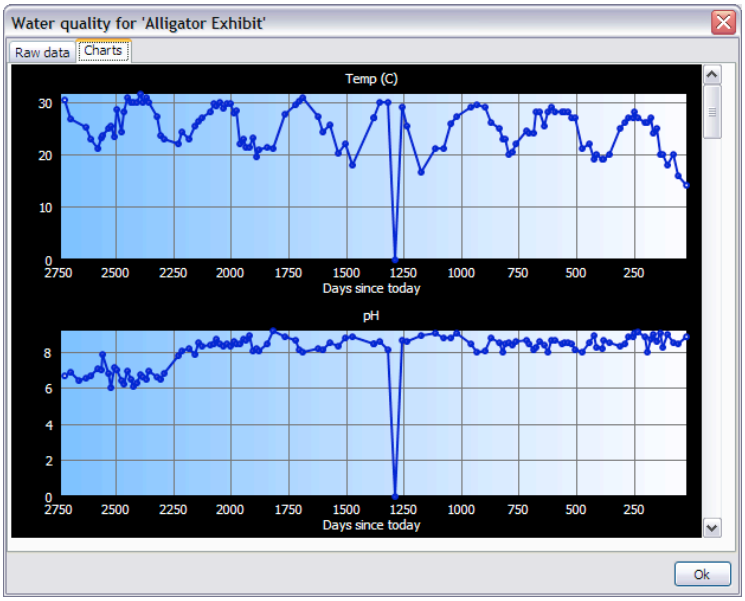
(daily) is for something that needs to be done daily. There is another **Other** category that allows specific dates to be specified.



Be sure to check the box before any item on the treatment plan that you wish to select. For the various medications, you can select the treatment form (if there is more than one) and the frequency as well as specific treatment dates or an until date for medications that are done daily. If properly configured, **RaptorMed** will automatically calculate the dose based on the desired dosage, the volume of the system and the concentration/form of the medication.

To specify a date, just double-click in any of the date fields and a calendar will appear that allows you to choose a date.

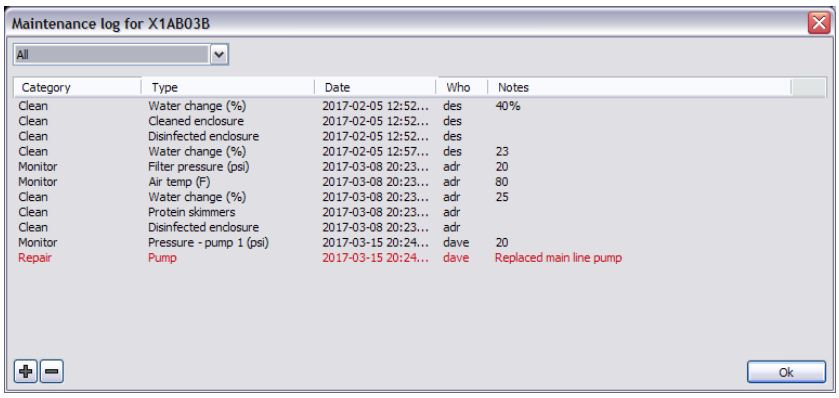
Viewing water quality and environment conditions data
To view this data for an enclosure, press the **Water chemistry** or **Environment conditions** links. A window will appear with two tabs. One tab displays the data in tabular/ spreadsheet form. The other tab graphs the data.



Jump to special entry
Press the Special/vet entry link. This will produce a list of special entries sorted by date. If you double-click on one, the log will jump down to the selected entry.

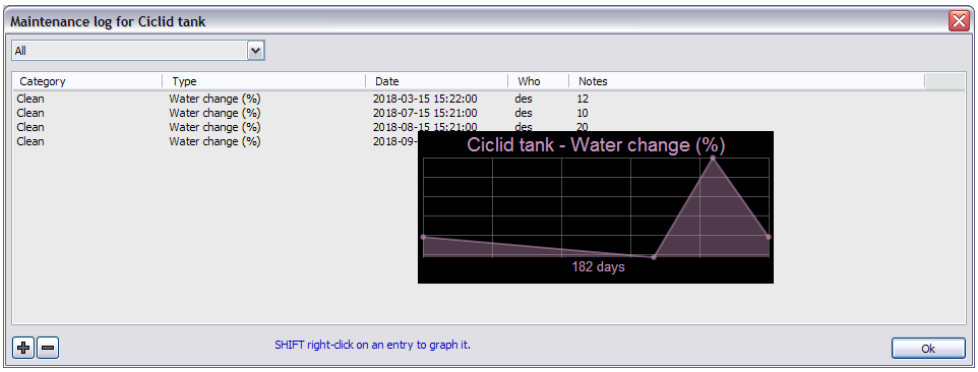
View options
If you click on this link, you can choose to view only the **Special entries**. This is very helpful when you want to filter out all the normal daily entries. You can also choose whether to display the entire medical record or just the last x months-worth of entries You can also choose whether to display problems that have already been resolved.

Advanced enclosure maintenance log
This function is a replacement for the basic enclosure maintenance log feature. This is most appropriate for systems that require a great deal of maintenance and monitoring such as aquariums. To access the log, press the **Maintenance log** link in the **Enclosure log** action bar. This will display the main log screen. It has a spreadsheet that displays all current log items. Each item has a description and a category. Commonly used categories include: `Clean, Monitor`, and `Repair`.



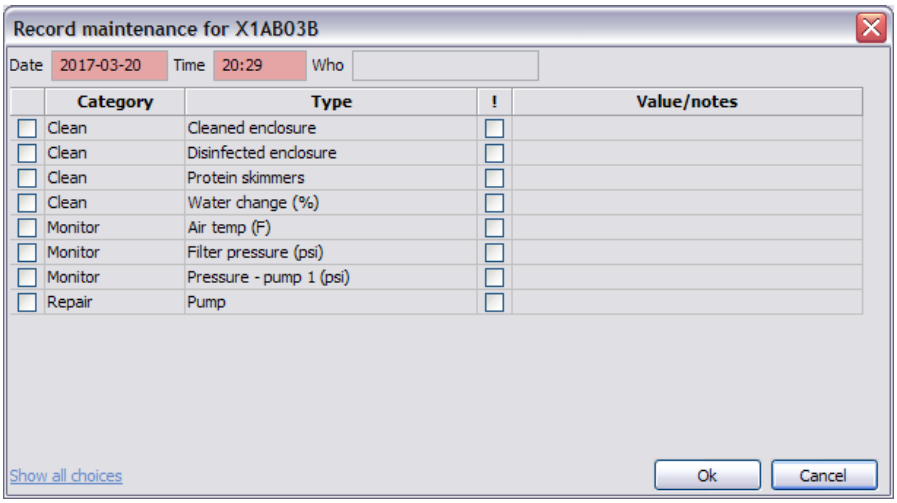
The date when the entry was made, who made the entry and a short notation are also displayed. You can sort by any column by clicking on the appropriate column heading and you can also use the list box at the top to limit the view to entries of a certain type/

description. If the entry has Note that is numeric in nature (for example: a pump pressure or a percentage water change), then the data can be graphed



by SHIFT right-clicking on any of the values. A small popup graph will be displayed. Click on the graph to dismiss it.

Press the **+** or **-** buttons to add or delete entries. Double-click on an entry to edit an entry. When you press the **+** button, a form appears that allows you to make multiple maintenance log entries at once. You can specify the date and time, who did the actual work and you can choose from a list of pre-configured choices.



By default, the list only shows choices that have been used in the past for this enclosure. This is helpful since your entire list of maintenance choices may be quite long, Since each enclosure may require only a small number of these choices, this keeps the list to a manageable length. If you need to choose something new, press the **Show all choices** link. To add a new maintenance entry, either check the checkbox in the first column OR enter something in the **Value/ notes** column. This column is useful for adding a short notation or for recording a value for a measurement for a numerical-type entry such as a pump pressure (in psi), for example. You can also mark an entry as important by checking the box in the **!** column. These entries will be highlighted in the main log screen.

Note: there is some redundancy with the **Water Quality** and **Environmental Conditions** recording functions. For basic measurements like water temp, etc, it is best to use those functions as they have powerful graphing and alerting features. The Advanced Enclosure Maintenance Log function, however is completely customizable

and it gives you the ability to record, log and measure almost anything. Therefore, you should use this for things that are not handled elsewhere as well as for recordings that are non-numeric in nature.

The actual values for the descriptions and categories in this log are entirely configurable in **Edit List Choices** (choose `Enclosure maintenance`). Each entry should be formatted as follows:

```
Category - Description
```

as in

```
Monitor - Pressure pump-1
```

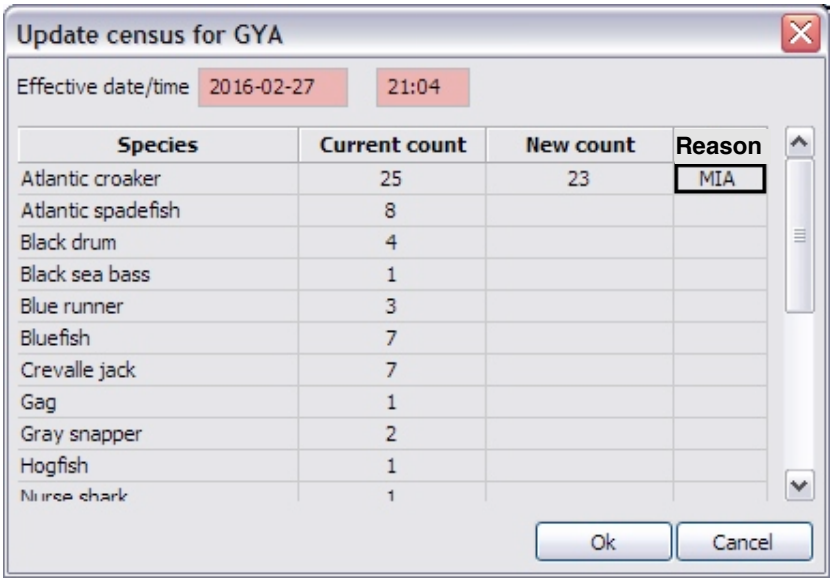
If you also include the units in parentheses as in

```
Monitor - Pressure pump-1 (psi)
```

then future versions of the program will interpret the **Notes** field as a numeric value and will be able to graph this data.

Update census command

This command is available for a specific enclosure via the right-click menu in the enclosure list on the main screen. It will display a spreadsheet with the current species counts. There is a column for you to record the new count for each species. If the new count is **less** than the previous count, then you must also choose a disposition or status code in the **Reason** column. Valid disposition codes are **D**, **MIA**, **E**, or **ESC**. This can occur, for example, in an aquarium setting when some animals are found to be missing or dead.



If the new count is **greater**, than the current count, an entry in the **Reason** column is optional. Valid choices are **Re-discovered**, **Reproduction** or **Transferred in**.

If the count for a certain species is unchanged, then

leave the **New count** field blank.

Note that only Group animals are included in the list. Individual animals are not included so any changes in their disposition must be done manually using the Animal Info screen.

All census counts for this animal can be automatically graphed on the **Census counts** tab in the Historical data viewer.

Reminders

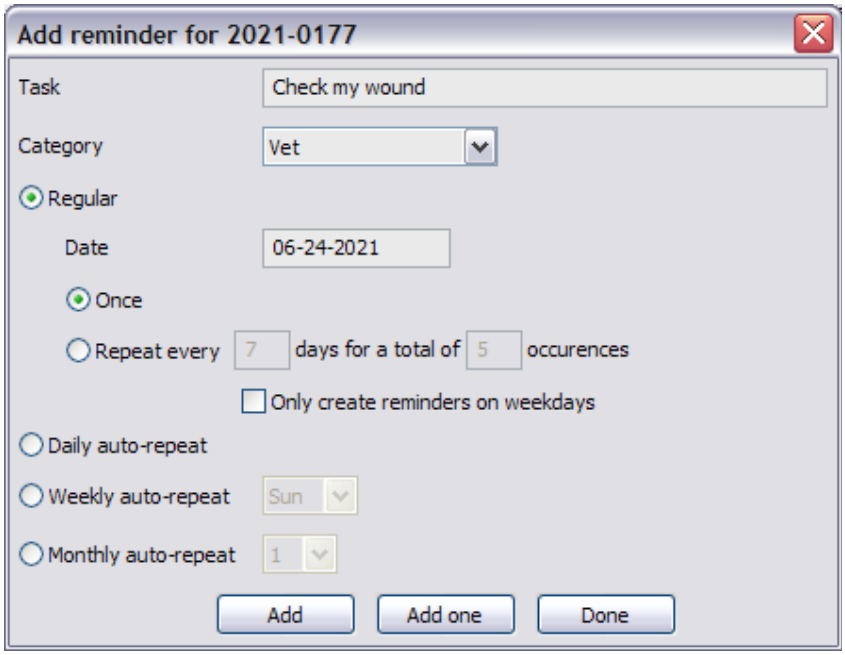
RaptorMed allows for reminders to be added to the system. A reminder can be set for an individual patient, for an enclosure or general purpose reminders can be added for the facility as a whole. Each reminder will be printed on the daily treatment sheets on the correct date.

Creating a reminder

To add a reminder for a patient, click the **Add reminder** link in the **Action Bar** on the patient's chart.

To add a reminder for an enclosure, right-click on the enclosure in the **Enclosure list** on the main screen and choose **Add reminder**.

To add a general purpose reminder, choose **Edit ▶ Add reminder** from the main menu.



Enter some text describing the task and enter a date. You can choose **Once** if you only want one reminder or you can have the reminder repeat any number of times by selecting **Repeat** and filling the **number of times to repeat** and the **interval in days between repeats**. These repeating reminders will begin on the date specified. If creating a sequence of reminders, you can check the **Only create reminders on weekdays** checkbox and the sequence will automatically skip to Monday instead of creating a reminder on Saturday or Sunday.

Additionally, you can create a reminder that will automatically repeat every day, on specific day of the week or on a specific day of the month. These reminders will continue forever until deleted.

You can also choose an optional **Category** for the reminder and this allows reminders to be sorted in the Reminder Viewer (see below). The category can be anything and can indicate a type of task (e.g. rehab or maintenance), a person's name or anything else

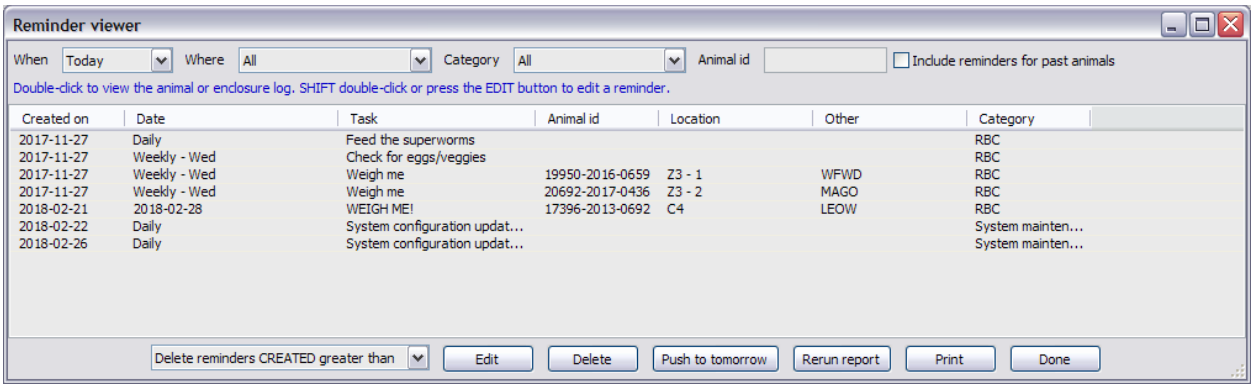
that allows you to group or organize your reminders. Reminder categories can be created as needed at any time (see editing list choices). There are several built-in reminder categories including:

- **Alert** - these can be used for many functions including by the Alert Manager when a special species is admitted.
- **Quarantine** - if configured, these reminders are automatically created when an animal is admitted to alert you when the mandatory quarantine period is over.
- **Vet** - reminders for the veterinary staff
- **System maintenance** - these reminders are auto-generated by the system when important maintenance events have occurred.

Once you have entered the reminder's information, press **Add**. This will add the reminder and keep the form open so you can add additional reminders. If you only need to add a single reminder, press **Add one**. The reminder will be added and the form will be automatically closed.

Viewing, editing and removing reminders

To view reminders, choose **Reports ▶ Reminder viewer** from the main menu. A window will appear that shows your reminders. The table shows the date the reminder was created on as well as the date that the reminder is set for. Realize that these are two separate things. The reminder date column may show a specific date or it will indicate when it is supposed to repeat for auto-repeating reminders. For example: "**Monthly -1**" repeats on the first of every month and "**Weekly - Wed**" repeats each Wednesday.



You can filter the list in several ways:

- **When** - Choose **All**, **Today**, **Upcoming** or **Tomorrow, Last 7 days** or **Last 30 days** from the **When** list.
- **Where** - Choose to view reminders for a single enclosure/location by selecting from the **Where** list.

- **What type** - Choose to view only reminders of a certain type from the **Category** list.
- **Who** - View reminders for a single animal by entering the animal id in **Animal id** field. After entering the id, press the **Rerun report** button to refill the list.

When the **Reminder Viewer** is displayed from the main menu, it will by default **NOT** display reminders for animals that are no longer live in the collection (i.e. died, euthanized, released, transferred, etc.). To view reminders for past animals, check the **Include reminders for past animals** checkbox. When the **Reminder Viewer** is displayed directly from an animal's chart, then all reminders for that animal are automatically displayed.

To edit a reminder, double-click on it with the **SHIFT** key held down. To view the chart for a animal or enclosure listed in a reminder, just double-click on it. Note that this behavior is reversed from previous versions of the program. You can also edit a single reminder by selecting it and pressing the **Edit** button. Note that you cannot change a reminder to an auto-repeating reminder and you cannot change the frequency of an auto-repeating reminder (i.e. from daily to weekly or monthly, etc.)

You can push a reminder to tomorrow by selecting it and pressing the **Push to tomorrow** button. This is handy for those days where you could not get everything done.

You can select multiple reminders by left-clicking and shift-left clicking. You can then delete or push them all simultaneously by pressing the **Delete** or **Push** buttons, respectively.

There is also an option to delete reminders based on their **CREATION** date. You can do this using the list at the bottom with "**Delete reminders CREATED greater than**" caption. It allows you to select a time period in the past such as 1 month, 6 months, 1 year, etc. This function was designed to help you to cleanup old reminders that are no longer needed. Note, however, that long-term auto-repeating reminders that are typically used for maintenance functions could be accidentally deleted with this function. A typical example is a reminder that runs monthly to change air filters or to check radiation exposure badges. So use caution when using this function.

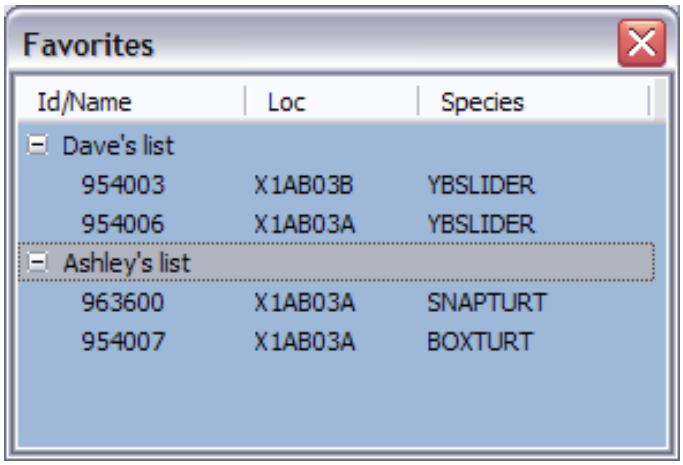
If you are viewing reminders for a specific animal, then an **Add** button will also be present that allows you to add new reminders.

You can sort the reminders by clicking on any of the column headers and you can print the currently displayed list of reminders by pressing the **Print** button.

As a shortcut, you can view all reminders for a single animal by clicking the **View reminders** link from the **Action Bar** in the patient's chart.

Favorites

Favorites are shortcuts to animals that you work with frequently or otherwise would like to have quick access to. Any number of favorites lists can be created and animals can be added or removed to a list at any time. Choose **Edit ▶ Favorites list** from the main menu. A window will be displayed that shows each favorites list as well as the animals that are part of each list. To access an animal's chart, just double-click on it.



Right-click and choose **Add new list** to create a new list. To add an animal to a particular list: select the list, then, in the **Animal** or **Enclosure** list on the main screen, right-click on the desired animal and choose **Add to favorites list.** Note that an animal can be on multiple favorites lists. You can also add a an animal to a favorites list by right-clicking on it in the results list in the **Advanced Search** and **Image Search** dialogs.

To remove an animal from a list, simply right-click on it and choose **Remove this animal from list**. Note that a list will cease to exist if all animals are removed from it, so there is no need to delete or remove a favorites list.

The size and position of the Favorites list will be remember when it is closed and will be restored the next time it is opened. It will also remember to expand the list to that was **last** selected.

Chapter 4

The historical data viewer
The reports
- Physical therapy report
- Last weights report
- Weight trends report
- The Site Map
- Year-end reports
- Miscellaneous reports

Historical data viewer

Press the **Historical data** link in the **Action Bar** on the animal's chart to view all sorts of medical and husbandry data. A window with several tabs will occur. The actual tabs displayed depends on the way your system is setup as well as on characteristics of the animal you are currently viewing such as species, disposition, etc.

- **Weight** - Displays a graph of the animal's weight and body condition score. There are also links to copy the chart image or the raw data to the clipboard for use in another program such as Word of Excel.
- **Feathers** - Displays a view of all the animal's feather checks. The most recent is at the top.
- **Imagery** - Displays thumbnail views of all the animal's imagery including photos and radiographs. You can click on each image to display it in a larger view. Click here for more information on viewing imagery.
- **PT** - Displays a graph of the animal's physical therapy sessions.
- **Eyes** - Displays a view of all the animal's eye exams. The most recent exam is at the top.

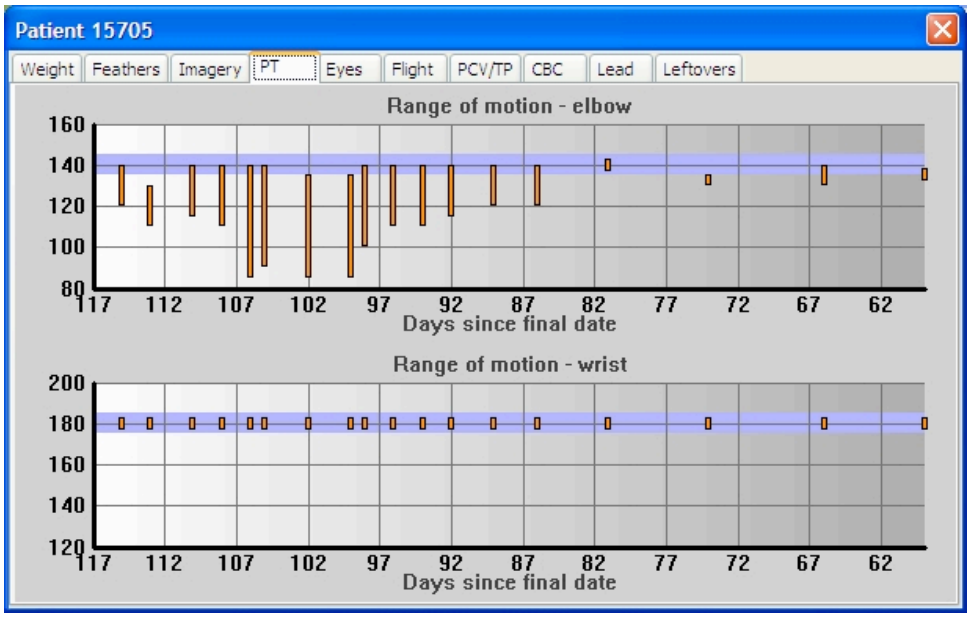
- **Flight** - Displays a view of all the animal's flight evaluations. The most recent evaluation is at the top.
- **Wound records** - Displays all the animal's wound reports in a chronological order so that you can assess progress easily.
- **PCV/TS/Buffy** - Displays a graph of the animal's PCV/TS/Buffy coat measurements. The normal range for the PCV is indicated by a light blue band and the normal range for the TS is indicated by a light orange band. Note that the ranges on the two vertical axes can and often will overlap.
- **CBC** - Displays a graph of the patient's CBCs.
- **Blood chemistry** - Displays a graph of the animal's blood chemistry values. Since there are so many analytes that can be recorded, you must choose the analyte to graph from a list.
- **Lead** - Displays a graph of the animal's blood lead measurements. Data points that were out of bounds (i.e. too low or too high to measure) are represented with red dots and each chelation day is indicated with a green circle. Note: a chelation day is defined as any day that has a record entry with the pre-configured chelation terms in it. The chelation terms are defined in the Chelation search terms entry in the **Settings** table. So, if your search terms are set to "`CaEDTA,DMSA`" the any entry that has either `CaEDTA` or `DMSA` in it will be interpreted to be a chelation day and a green circle will be overlaid on the map. This is not entirely accurate as you may just have entered one of those terms in the record as part of a description or plan. So please be aware that the chelation overlay should only be used as a rough guide.
- **Dose calcs** - Displays all the animal's dosage calculations. Note that this feature may not be enabled on your system.
- **Food intake** - Displays a graph of the daily amount fed and the leftovers. Note that this feature may not be enabled on your system.
- **Group weight ranges** - Often individuals in groups of animals cannot be uniquely identified. In this case, the lowest and highest weight, as well as the median weight) in the group can be recorded and graphed. This allows you to spot trends without actually knowing individual weights. Click here for more information.
- **Group census counts** - Displays the census counts for this animal. This is only for animals that are marked with the **Group checkbox**.
- **Enrichment** - Displays a summary of enrichment records.
- **Behavioral assessments** - Display a graph of your assessments.
- **Fecals** - All fecal results will be listed in a tabular form sorted by date.

If you click on a point on the Weight, PCV/TS, CBC and Lead charts, the actual value and date will be displayed. On many of the charts (including the Weight chart and some of the bloodwork tabs), you can also choose the date range to display.

You have the option of displaying actual dates or the number of days since today on the X-axis. Displaying the number of days since today is sometimes more useful in a rehabilitation setting when animals are not in you care typically for very long.

The **Physical therapy (PT) chart** displays the range of motion (ROM) for each major joint in the limb undergoing therapy. There are separate charts for each each joint (the elbow and the wrist in the case of a wing). Each PT session is represented by a vertical orange bar. The bottom of the bar indicates ROM angle at the start of session and the top of the bar indicates the angle at the end of the session. The blue band represents the ideal angle for the specific joint. For the typical raptor, the ideal angle is 140 degrees for the elbow and 180 degrees for the wrist. A healthy bird should have very short orange bars that are contained completely within the blue band. The left side of the display is the oldest and the right side is the most recent.

In the example in the screenshot, the elbow had poor ROM that then progressed to near-perfect extension. The wrist was very good from the beginning. As you can see, the display enables you to determine very quickly whether the ROM is good or bad and whether or not you need to continue physical therapy.

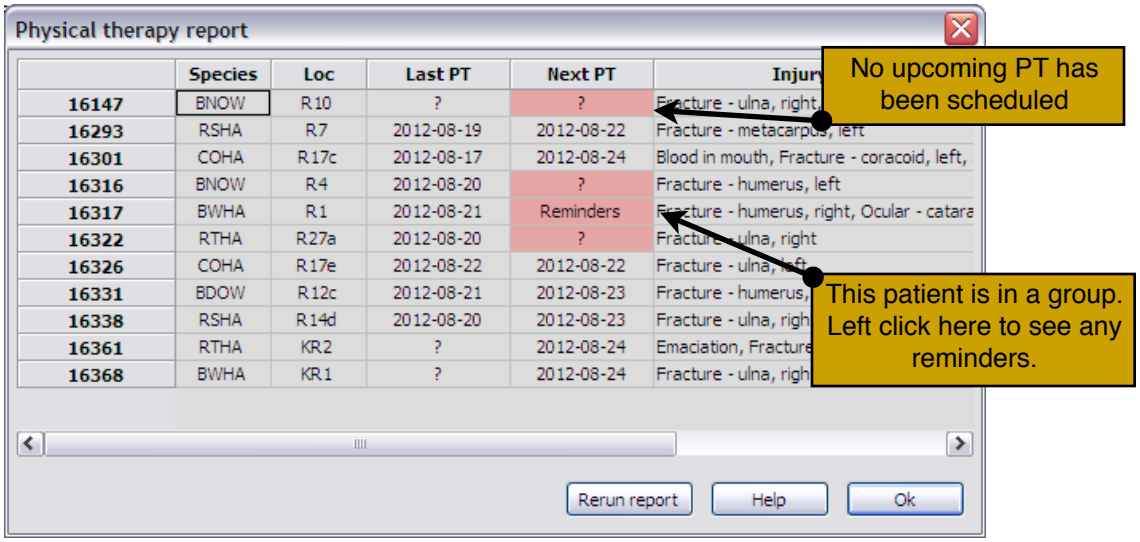


Reports

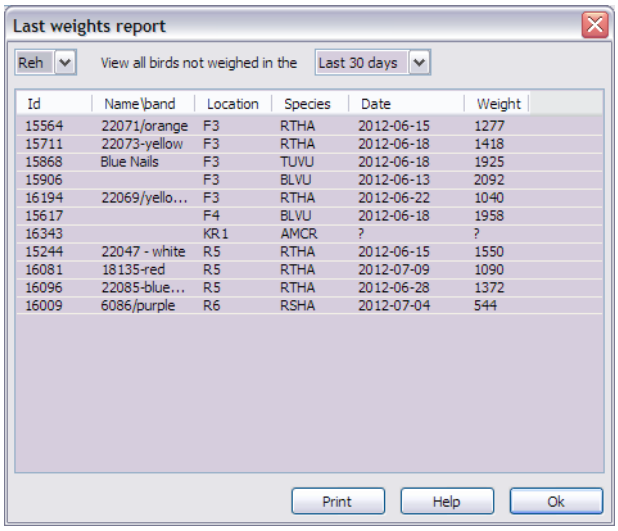
The Physical Therapy Report

This report allows you to review at-a-glance all patients that are currently undergoing physical therapy (PT). A patient will be included in this report if it's **Undergoing PT** checkbox is checked. Click here for more information. The report shows the patient id, the species, the current location, the last PT date, and the date of the next scheduled PT session.

If a next PT is not scheduled, the box will be highlighted. For an individual patient, physical therapy is scheduled on the patient's individual treatment plan (click here for more information). If the patient is part of a group, then future PT sessions must be scheduled with a **Reminder** since patients in a group do not use their individual treatment plans. In these cases, the **Next PT** column will say **Reminders**. Left click on the **Reminders** text and the list of upcoming reminders will be displayed.



The Last Weights Report



This report allows you to quickly determine which animals have not been weighed recently. Choose **Reports ▶ Last weights report** from the main menu. You can choose to view:

- Either animals currently in rehab or resident animals
- The time period to look back. For example, only show animals that have not been weighed in 30 days.
- Only animals taken care of by a specific curator.

The report displays the patient id, name/band information, the location, species, and the last weight/date. It also includes the last body condition score, who did the scoring as well as the ideal weight and the percentage off from the ideal weight. Note: the ideal weight is specified for each animal in **Animal Info** on the **Husbandry** tab.

It is a good idea to check this report periodically to make sure a patient doesn't "slip through the cracks". **Note**: resident animals in aquatic environments are **not** included in this report as animals in aquariums typically do not get weighed very often.

The Weight Trends Report

Right-click on a location in the **Location** list and choose **Show weight trends.** This command displays the weight trends for all animals in the enclosure. The animal's id number and/or name is displayed to the right of the trend line. The actual weight can be viewed by clicking on any point. The overall trend is color-coded.

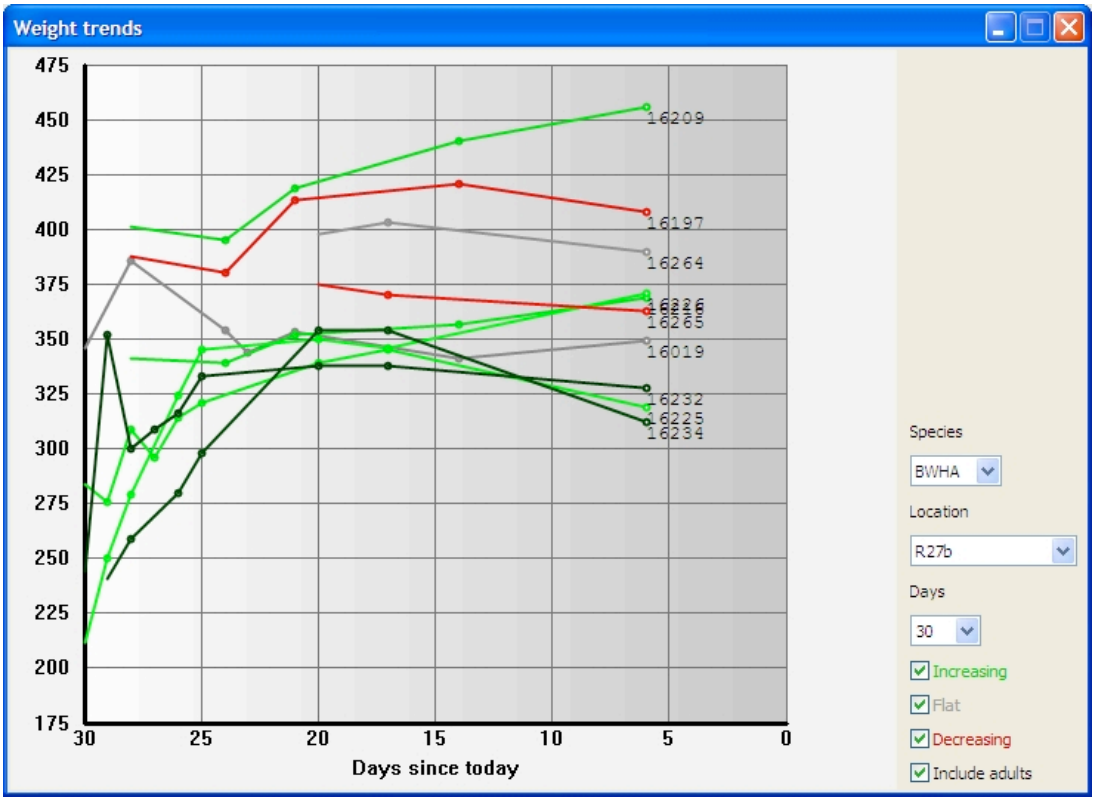
- Green means that the trend is generally increasing.
- Gray means that the trend is mostly flat.
- Red means that the trend is generally decreasing.

When calculatimg the trend color, recent changes (either up or down) are weighted more heavily than past changes.

The display can be filtered to only show:

- A single species or species group
- Animals in a specific location/enclosure
- Only animals of status **Reh** and/or **PR**
- Only lines based on their color
- And you can choose how far back in time to display the data including an option to show all data points.

- There is also a checkbox to include adults or not. Note that this only works for avian species whose ages are coded with USGS Bird Banding Lab ages. Specifically, juveniles are ages L and HY and any other age code is considered an adult.



Note: you can also view the Weight Trends Report by choosing **Reports ▶ Miscellaneous ▶ Weight trends** from the main menu. In this case, all live animals in the collection will be graphed simultaneously. This, by itself is typically a bit too cluttered to be useful. But by selecting a single species, you can view the weights of all animals regardless of what enclosure they are currently in.

The Site Map

Choose **Reports ▶ Site viewer** from the main menu to view the **Site Map**. This shows a graphical view of your facility with each enclosure indicated by a color code.

- **Red** - under construction
- **Orange** - this enclosure is dirty and should not be used
- **Yellow** - occupied by at least one patient

- **Green** - empty

In cases where an enclosure is under construction or dirty, the empty/occupied color status will be overlaid over the under construction/dirty color like a bulls-eye.

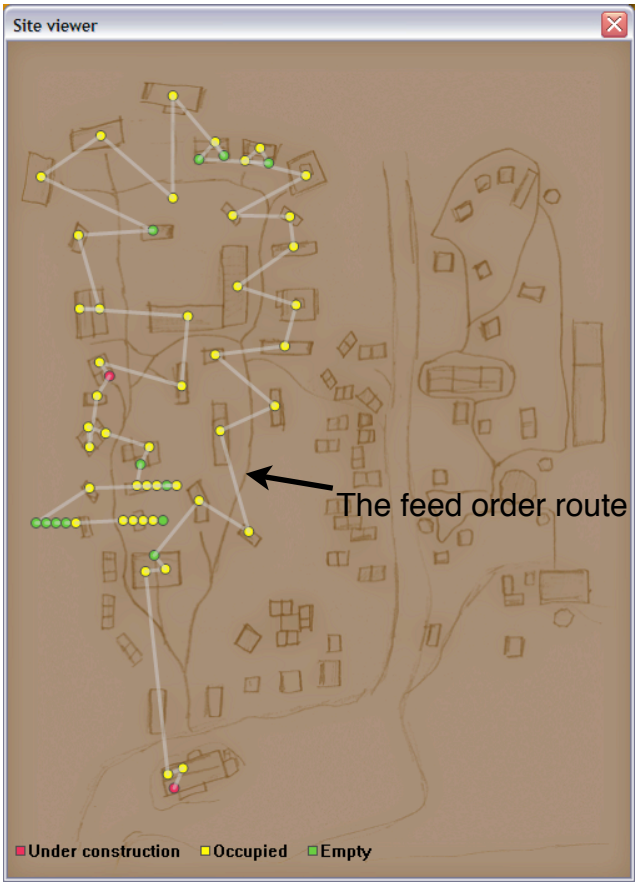
Click on each colored indicator to see a popup summary of the enclosure.

Shift-left click on any location on the map to save the coordinates for later recall in the **Location Editor** (click here).

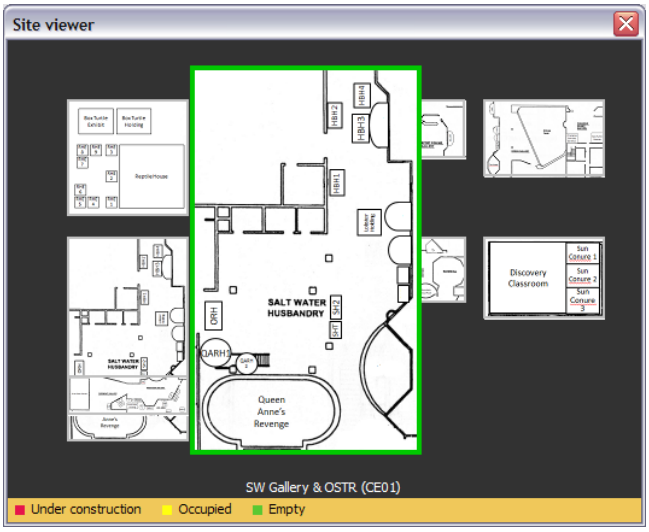
Right click and choose **Reload** to have the map redrawn. This is useful if you make a change to a location and want to see the changes reflected in the **Site Map** without having to close it and re-open it.

Right click and choose **Show feed order** to display the route specified by each enclosure's **Feed order** setting. To hide the route, right click and choose **Hide feed order**.

Click here for more information on configuring locations and enclosures.



Some organizations have a multi-level site map. Small thumbnails are displayed for each level. Click on a thumbnail to view an enlarged view of the level or area. Each individual location is indicated by a colored dot. Click on the dot to bring up the Enclosure log for that specific location.



Resident Animal Summary
This report creates a concise summary of all the current residents animals. The report includes the animal's name, id, species, location, sex, age, a list of the current problems and any other annotations that were recorded in the patient's **Notes** field (click here for more information on the **Notes** field).

Active Patients
This report displays a list of all patients that are considered "active". The report is configurable to use one of two algorithms to determine which patients are active:

- Those with the "**Active patient**" checkbox checked. Enclosures with the "**Pending issue**" checkbox can also included here.
- Or those with at least one unresolved problem.

You can double-click on any item to open the patient's chart.

Donation report
This report tabulates donation information. You will be prompted to choose a date range and a folder to save the report to. The report totals donations made via cash, check and credit card.

Recent special entries
This report will display all special entries made in the last X days where X is a configurable number of days. Special entries are entries made in an animal's chart or in an Enclosure log when the **Entry type** is something other than **Normal entry** (i.e. Vet entry, important event). This report contains a list for individual animal special entries and one for Enclosure log special entries. Double-clicking on one of the special entries

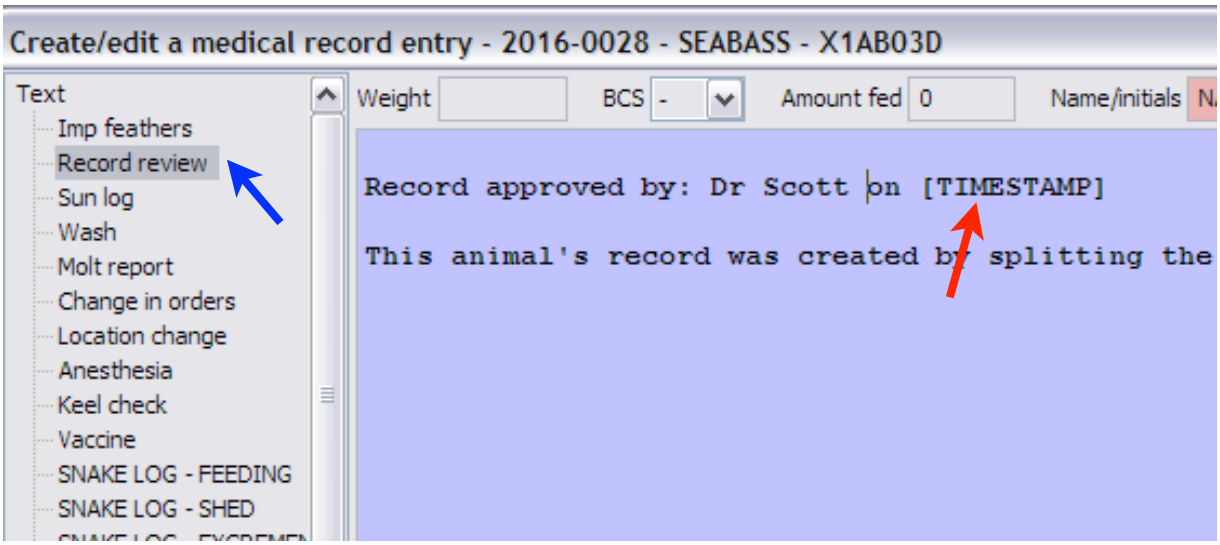
will open the corresponding animal's or enclosure log chart. There is a selection list that allows for only entries of a specific type to be viewed.

Entries that need review
If enabled on your system, this report will display all entries that need review before being finalized.

Note: only entries created by a user that is supervised by the current user will be included in this report. A user's **Supervisor** is specified in the User Manager.

Entries that need review may be present in an animal's chart or in an Enclosure log. Because of this, this report contains a list for individual animal entries and one for Enclosure log entries. Double-clicking on one of the entries will open the corresponding animal's or enclosure log chart. The record can be edited and the entry type should be changed to one of the other options such as **Normal** or **Vet entry**. If configured on your system, there may be a text template (**blue** arrow) that you can use to auto-insert a text statement stating that this record was reviewed. This template can include a `[TIMESTAMP]` macro (**red** arrow) that will auto-expand to the current date and time. It can also contain a `[USERNAME]` macro that will auto-expand to the full name of the currently logged in user.

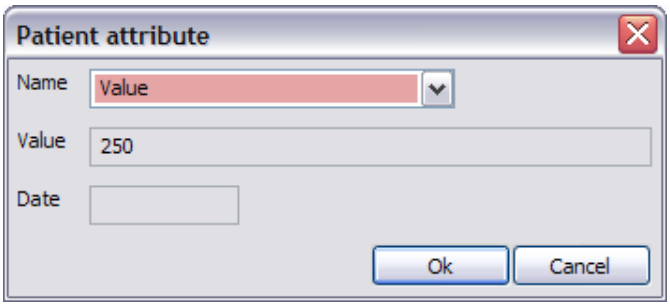
After you have reviewed and saved some entries, you can then press the **Rerun report** button to refresh the screen to reflect your changes.



Multiple entries can also be selected in each list and the corresponding **Auto-approved selected...entries** link can be pressed to automatically approve more than one entry at

once. These entries will be set to a **Normal entry** but you do not have the option to edit each entry.

Collection value report
This report will generate an itemized list of all animals that are currently in the resident animal collection. The total value for each species and the total value for the entire collection will be calculated. Only **resident** animals are included. Animals in rehab are ignored. The value for each individual is taken from the **Value** specified for each species in the **Species Editor.** However, as individuals of a particular species may have different values, the value of any individual can be overridden by creating an **Value** attribute and specifying the value in the local currency. For example, a species may have a typical value of $50.00 but an unusual individual happens to have a value of $250 due to some interesting color or genetics. In this case, you can add an animal attribute with the **`Name=Value`** and the **`Value=250`**. See **Attributes** for more information.



Enclosure Cleaning and Maintenance
This report displays when each enclosure was last cleaned, disinfected and when the water was last changed. It can be used to schedule the next cleaning and to prioritize which enclosure should be cleaned next. For installations that use curators, the list can be filtered by a specific curator. If an enclosure contains only one animal, then that animal's name will be displayed next to the enclosure name.

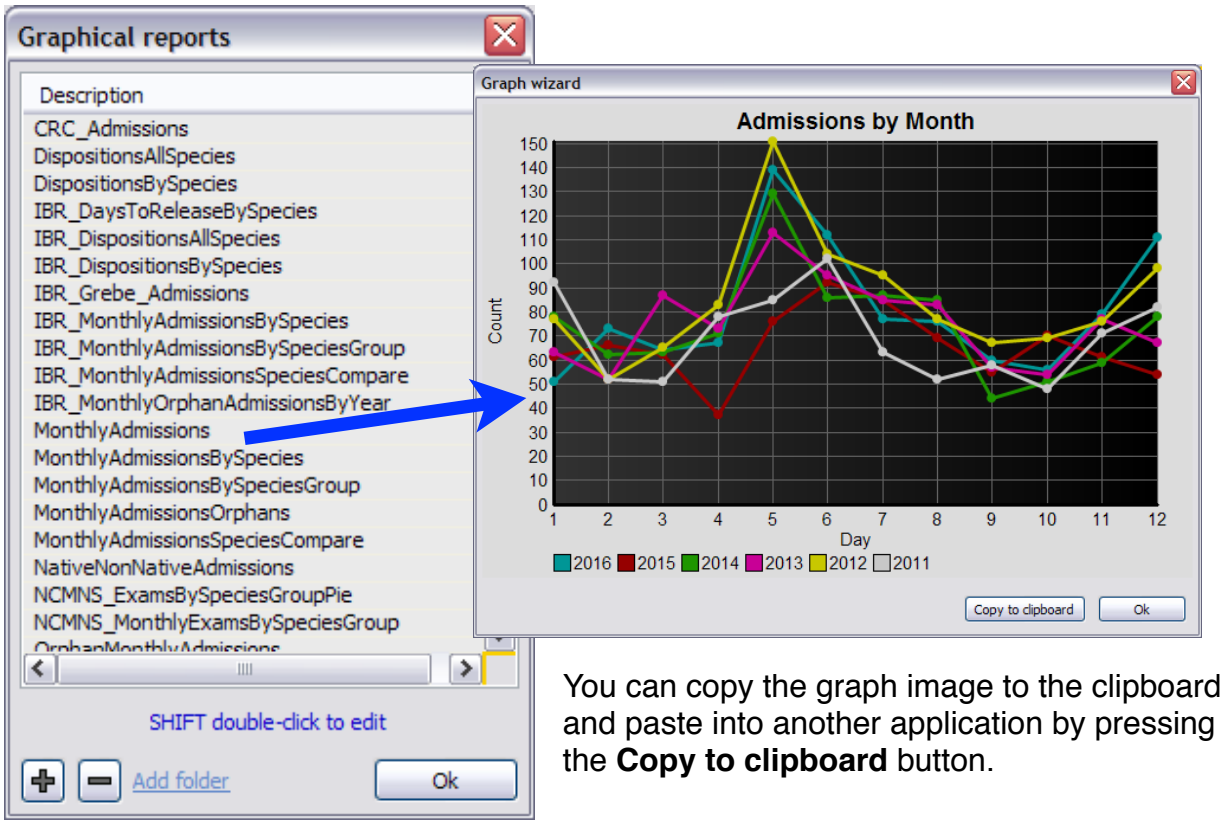
Upcoming Stuff
This report displays a calendar with all scheduled procedures and reminders printed for each day. Note only animals of status **PR** or **Reh** that are marked as **Active Patients** are included in this report. This report allows you to choose a starting date. The report will start at the Sunday on or before you chosen date and will include the following four weeks.

Upcoming stuff

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12	13	14 A09000 / X3PP000 R: Check for swelling	15 KATIE / X3PP000 Radiograph:	16	17	18
19	20	21	22	23	24	25
26	27	28	Mar 1	2	3	4
5	6	7	8	9	10	11

Graphical Reports

Graphical reports are prebuilt queries that generate graphic displays. Each report is stored in a separate file and you can open a report by selecting **Reports ▶ Graphic reports** from the main. A chooser window will appear. You can select and view a report by double-clicking on it.



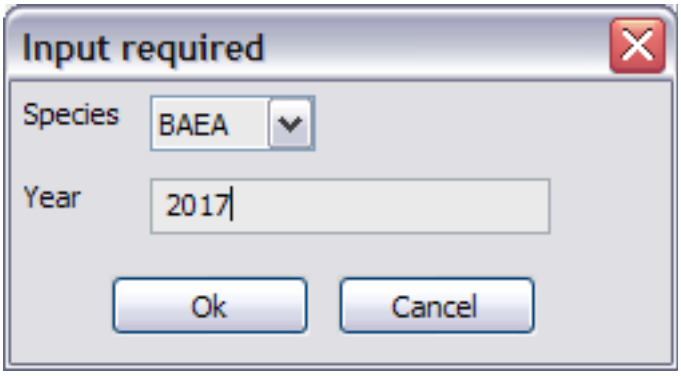
You can copy the graph image to the clipboard and paste into another application by pressing the **Copy to clipboard** button.

You can add a new report by pressing the **+** button. A file chooser will allow you select a file to add. These files typically have a `.dgd` extension. You can remove an existing

report by selecting it and pressing the **-** button and you can also create folders to help arrange you reports by pressing the **Add folder** link.

You can edit an existing report by double-clicking on it while holding down the SHIFT key. This will open the file in Notepad. Once you are done editing the report, just save and then run it by double-clicking without the SHIFT key. Please contact customer support for information on the report file format.

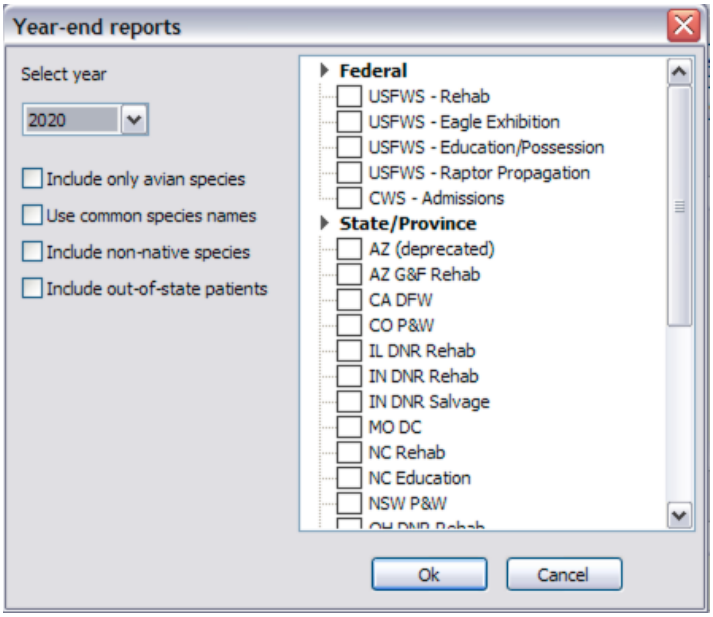
Some reports have "variable" fields that require user input. In these reports, you will be prompted to select or enter various things such as a species or year. It all depends on how the report was constructed and what it is trying to display.



The Year-End Reports

Choose **Reports ▶ Year-end reports** from the main menu to generate your year-end state and federal reports. You can select either this year or up to 10 years into the past as well as the report you would like to run. The following options apply to all reports:

- **Include only avian species** - the report will include only avian species. Otherwise all types of animal species will be included in the report.
- **Use common species names** - the reports will use the common name instead of the species abbreviation.



In addition, there are state-specific options that you can select. Once you choose the reports to generate, press the **Ok** button. You will then be prompted for a folder to save the reports to. The reports are created in an html format so you can view them in a web browser by double-

clicking on them. You can also send them as an attachment to an email.

The following reports are currently supported:

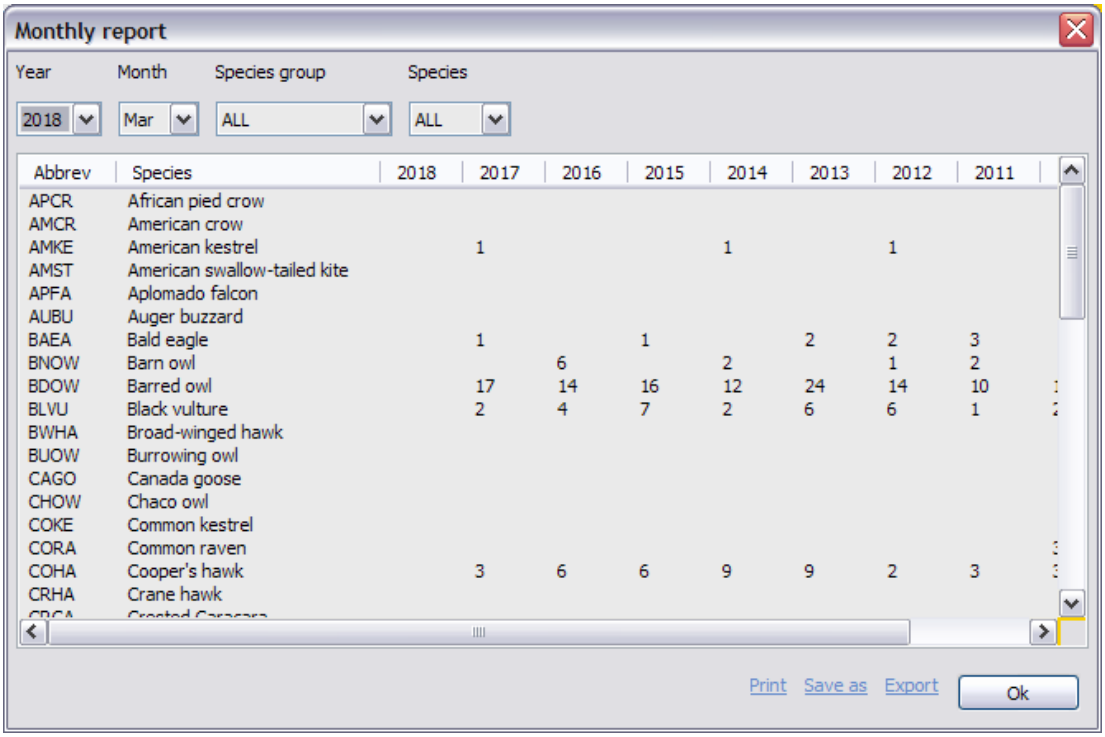
- US FWS rehabilitation
- US FWS eagle exhibition
- US FWS education/possession
- US FWS raptor propagation
- US FWS salvage
- Canadian Wildlife Service admissions

- AZ G&F state rehabilitation report
- CA DFW state rehabilitation report
- CO DFW
- IL DNR state rehabilitation report
- IL endangered/threatened program usage report
- IN DNR rehabilitation report
- IN DNR salvage report
- KS DWPT report
- ME DIFW report
- MO conservation department rehabilitation report
- NC state rehabilitation report
- NC state education report
- NSW P&W - New South Wales, Australia
- OH DNR state rehabilitation report
- OH DNR state education report
- OH programs report
- Ontario FW4004 - Ontario, Canada
- PA state amphibian/reptile education report
- SC DNR state rehabilitation report
- TN WRA state rehabilitation report
- TN WRA education report
- TX state education report
- WA DFW state rehabilitation report
- WV DNR state rehabilitation report

Monthly Report

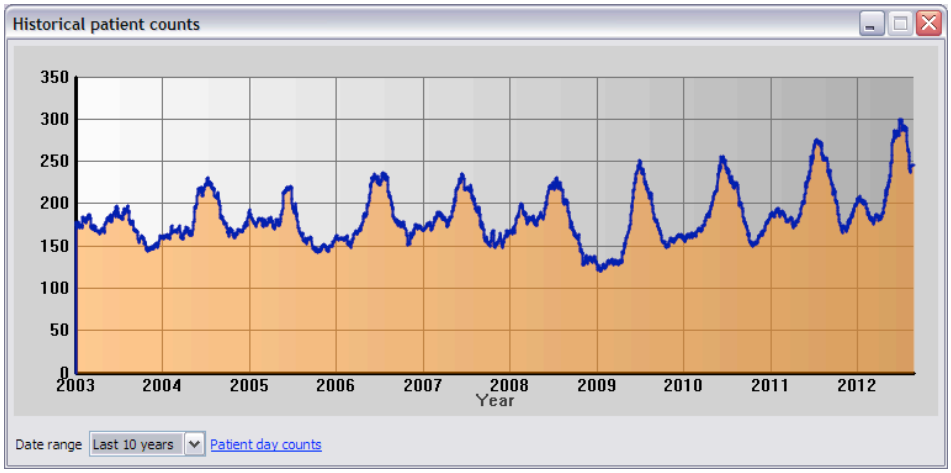
This report displays the number of each species admitted on a monthly basis and it compares/displays the corresponding values for 10 previous years. You can select the year, month, species group and species. In all filters, you can also choose **All**.

This report can be printed or saved as an html file and the raw data can be exported to the clipboard for analysis in an external program such as Excel.



The Historical Animal Count Report

This report displays a graph of the total animal population (animals in rehab and permanent residents) over time. You can choose the time duration over which to display the data and you can see a tally of the total animal-days per year for the last 5 years by pressing the **Animal day counts** link. This report is very useful when forecasting as it clearly shows monthly and yearly trends regarding your animal population. You can see the yearly maximums by pressing the **Show yearly maximums** link.

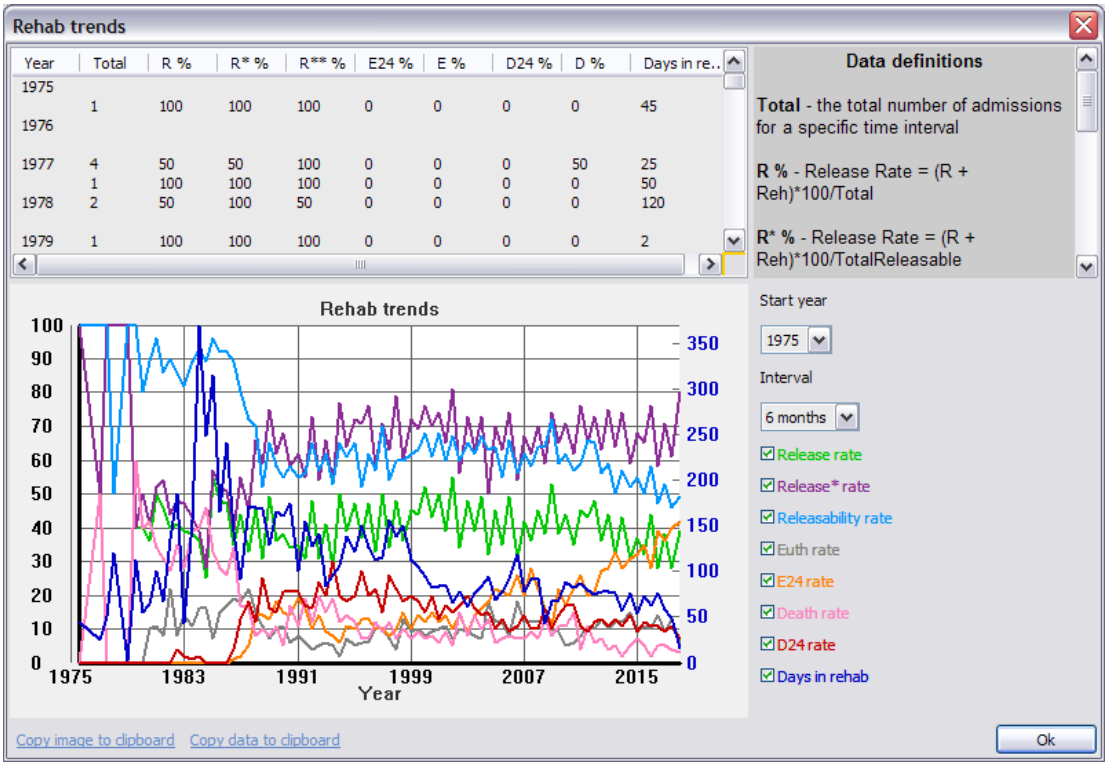


Rehab Trends
This report tabulates and graphs various statistics over time. The following statistics are calculated:

- Release rate (2 different ways)
- Releasability rate
- Euthanasia rate
- E24 rate
- Death rate
- D24 rate
- Days in rehab

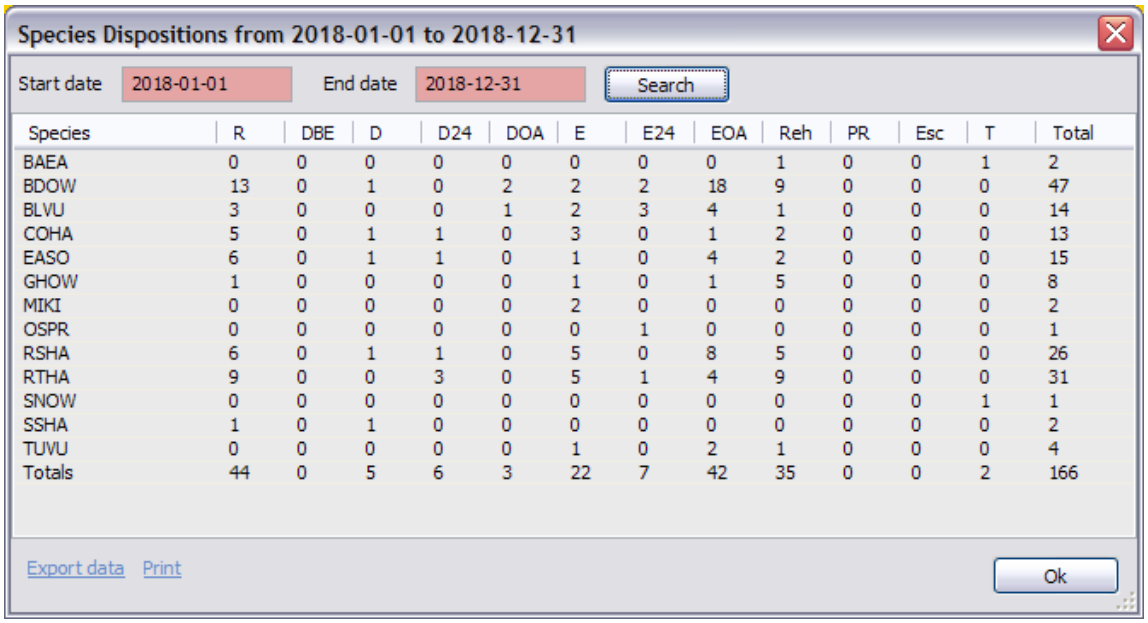
The formulas used to calculate the various statistics are displayed in the upper right corner and the actual data is displayed in a table in the upper left. You can choose the **Start year** as well as which statistics to graph. In addition, you can choose an **Interval** of either one month or six months. This **Interval** is used to determine how many data points are calculated to create a graph.

Both the graph image and the raw data can be copied to the clipboard by pressing the appropriate links below the graph.



Species disposition report

This report totals the individuals for each species admitted within a specified date range by their current disposition/status. The data can be exported or printed.



Species	R	DBE	D	D24	DOA	E	E24	EOA	Reh	PR	Esc	T	Total
BAEA	0	0	0	0	0	0	0	0	1	0	0	1	2
BDOW	13	0	1	0	2	2	2	18	9	0	0	0	47
BLVU	3	0	0	0	1	2	3	4	1	0	0	0	14
COHA	5	0	1	1	0	3	0	1	2	0	0	0	13
EASO	6	0	1	1	0	1	0	4	2	0	0	0	15
GHOW	1	0	0	0	0	1	0	1	5	0	0	0	8
MIKI	0	0	0	0	0	2	0	0	0	0	0	0	2
OSPR	0	0	0	0	0	0	1	0	0	0	0	0	1
RSHA	6	0	1	1	0	5	0	8	5	0	0	0	26
RTHA	9	0	0	3	0	5	1	4	9	0	0	0	31
SNOW	0	0	0	0	0	0	0	0	0	0	0	1	1
SSHA	1	0	1	0	0	0	0	0	0	0	0	0	2
TUVU	0	0	0	0	0	1	0	2	1	0	0	0	4
Totals	44	0	5	6	3	22	7	42	35	0	0	2	166

Program usage report

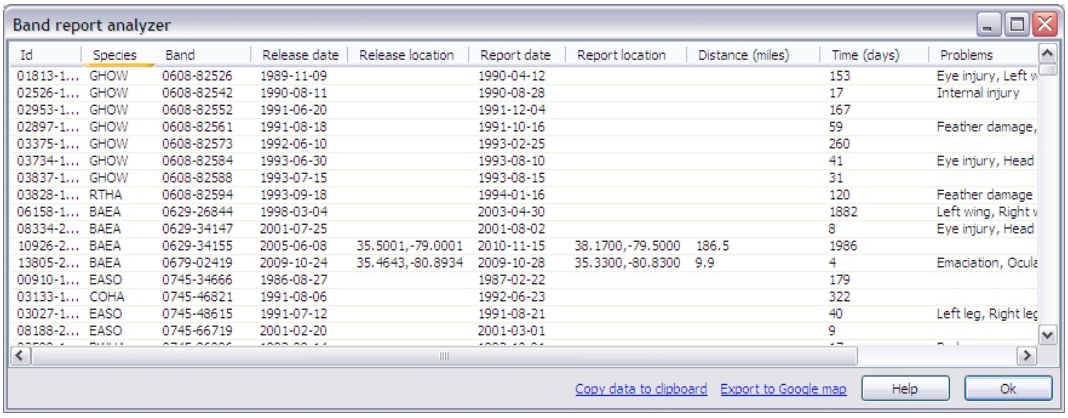
These reports total program usage for a specified year. Only animals with **Program animal** checkbox checked are included on this report and this report is driven by records save using the **Program Log**.

This report comes in two forms:

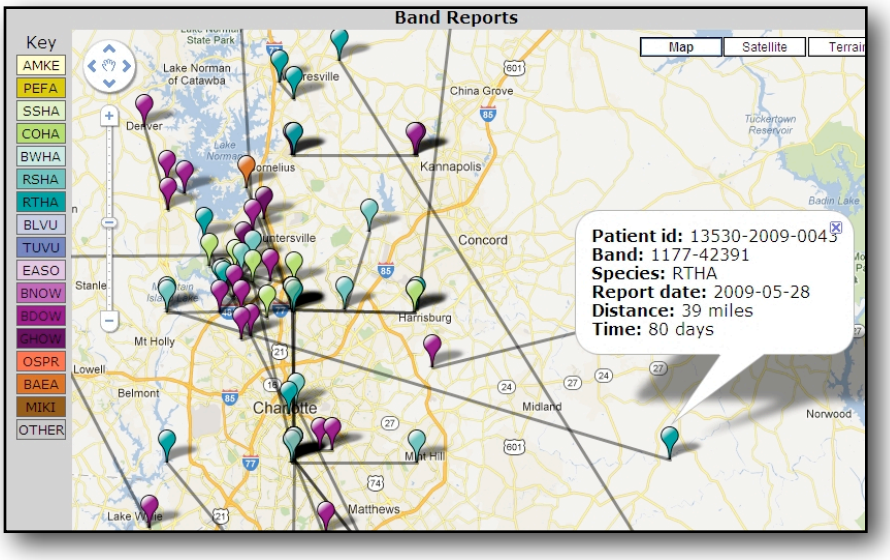
- **By individual** - totals the total number of programs for each individual animal. If recorded, this report also tallies the total number of people seen by each animal.
- **By group** - the total number of programs is tallied based on various user-defined groups of species such as “Invertebrates” or “Mammals” or “Turtles” for example. The groups are customizable. Contact Customer Support for help in defining your groups.

The Band Report Report

This report will produce a spreadsheet that summarizes each band report. It includes information about the patient as well as the time elapsed and distance traveled between the initial release and the subsequent report. You can sort the spreadsheet by clicking on each column and you can export the data to the clipboard to paste into another program like Excel by clicking the **Copy data to clipboard** link.

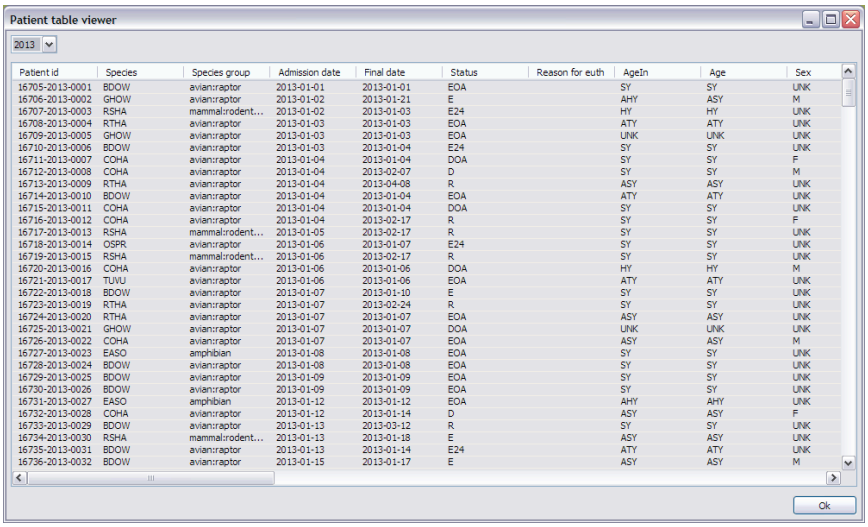


You can also export the reports to a Google Map by pressing the **Export to Google map** link. A new map will open that shows each report connected by a line to the preceding release. You can click on each balloon to get details about each report.



Patient Table Viewer

This report lists all patients in a tabular format. You can select which year to view and then sort the entries by clicking on any column heading.



Sample Viewer
This report lists samples that have been collected. Click **here** for more information on samples. You can display samples whose results are still **Pending** or all **Banked** samples or all samples by making a choice from the **Which** list. You can also enter a specific **Animal id** to view samples for just that patient. Double-click on any entry to open the animals complete chart.

You can print the currently displayed list by pressing the **Print** link and you can reload the list by pressing the **Rerun report** link. This is useful if changes have been made since you opened the report. By pressing the **Rerun report** link, you don't have to close and re-open the report.

Note: sample test results are considered **Pending** if the test results field is blank.

Client-owned animal report
This report shows important information for all your client-owned animals. You can view all new admissions between a date range or you can view all "active" patients.

Miscellaneous reports
Note: some of the reports listed below may not be enabled on your system by default. Please contact customer service for help if you do not see a specific report.

Admissions
This report displays the number of admissions with a user-specified date range. The report is broken down by species and both the common and scientific name are displayed.

Cold-intolerant patients
This report lists all patients (in rehab or permanent resident) that have their **Cold intolerant** checkbox checked. Click here for more information.

Controlled drug usage
This report tallies the use of all controlled drugs over a user-defined time-period. Only drugs with the **Controlled** checkbox checked in the **Medication Editor** will be included. The actual usage recordings are done using the **Controlled drug** choice when making an entry in an animal's chart.

Cope report
This report lists all patients (in rehab or permanent resident) that have their **Needs cope** checkbox checked. Click here for more information.

Emergency response plan
This report includes only resident animals. It is designed to provide a quick overview of what to do in the event of an emergency such as a fire or storm that requires evacuation. You must specify three things for each animal:

- A priority - higher numbers have more priority
- A short transport plan (i.e. "DES to take home")
- A short plan description - (i.e. "Feed 200 g rat each day")

These three settings are provided by using the **Attribute** mechanism and the three attribute names are **Emergency response - priority**, **transport** and **plan**, respectively.

Endangered species
This report displays all endangered species that were admitted within a specific year. Only animals with a status of **Endangered** specified in the Species Editor will be included.

Euthanasia
This report displays all euthanasia in specific time period and the list can be filtered by species. The drug/method use for euthanasia is also display. The feature can be enabled if desired (contact customer service to enable it) and it integrates with the **Controlled Drug Log** used to record the use of controlled substances.

Falconer evaluation waiting list
This report lists all patients in rehab that have their **Needs falconer eval** checkbox checked. Click here for more information.

Imp report
This report lists all patients (in rehab or permanent resident) that have their **Needs imp** checkbox checked. Click here for more information.

Listed species report
This report generates a current census that lists all animals of species that are either a state species of concern, a federal species of concern or are on the CITES list. The report is arranged by taxonomy.

Missing release locations
This report lists all patients that have been released but for which an actual latitude and longitude have not been recorded in their **Release** record. Click here for more information. This report is helpful for birds that have been released with a federal band because the release location must be recorded and submitted with your banding reports.

No entry
These reports list enclosure or animals that have not had an entry made in their charts today or yesterday.

For the animal reports: these reports include all animals (in rehab or permanent resident) that have not had an entry made in their chart. It is a good idea to run this report at the end of each day to catch any animals that may have been accidentally forgotten. If your system is configured to use **curators**, then this report will only list animals that are cared for by the curator selected on the main screen.

For enclosure reports: enclosures marked as **inactive** are ignored by these reports

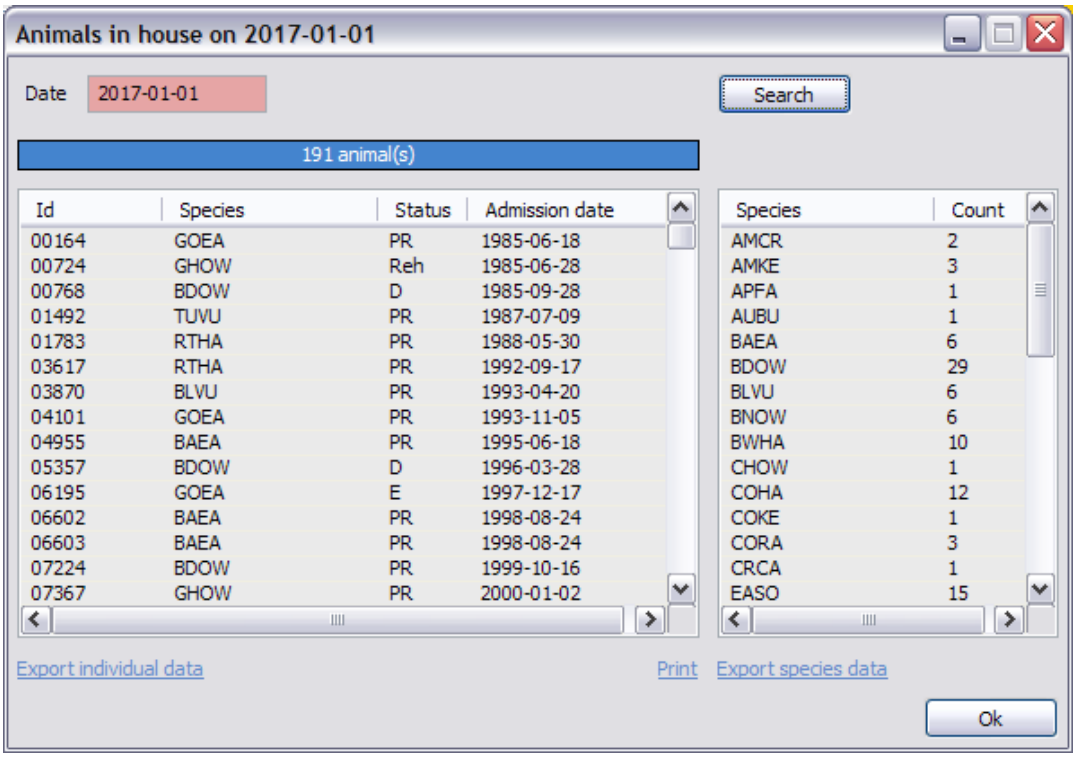
No leftovers
This report displays all animals that have not had leftovers for the last X days where X is a configurable number. This report requires that the **Leftovers** field in the Medical Entry form be used and it is useful in finding animals that may need to have their diet increased.

Not fed today
This report displays all animals that have not been fed today. It uses the **Amount offered** field in the add/edit Record Entry form and is only available if this field has been enabled on your system. Currently, this report only lists animals that have at least one entry today but none of them have an amount offered specified. This report does NOT list animals that simply do not have any entry today. This will be fixed in future updates.

Ophtho consult waiting list
This report lists all patients (in rehab or permanent resident) that have their **Needs ophtho consult** checkbox checked. Click here for more information.

Orphans ready for transfer
This report lists all patients in rehab that have their **Neonate/orphan** checkbox checked and their **Release approved** checkbox checked and they have an expected release date set. Click here for more information on the checkboxes and here for information on setting the **Expected Release Date**. Basically, this lists all orphans that are ready to transfer to another facility to finish the rehab process.

Patients in hospital
This report lists all animals (in rehab or permanent resident) that were live and on site on a specific date. Enter a specific date and press Search. All individuals will be listed to the left and a species breakdown will be displayed on the right. The data can be printed or exported.



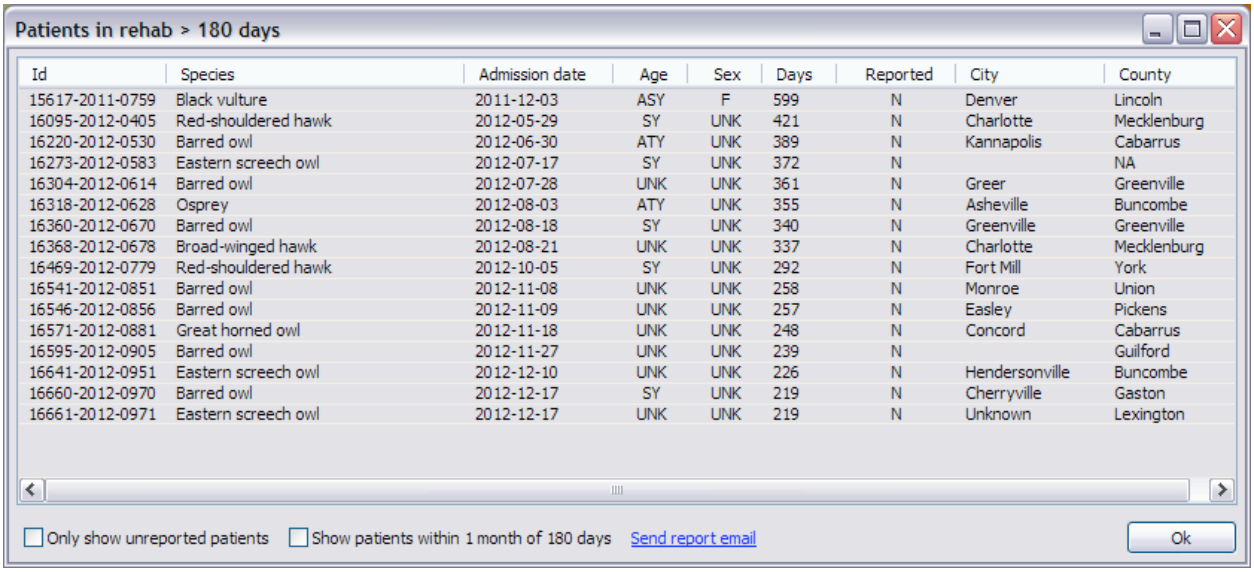
Patients that need live prey test
This report lists all patients in rehab that have their **Needs live prey test** checkbox checked. Click here for more information.

Patients that need placement
This report lists all patients in rehab that have their **NR** checkbox checked and their **Has placement** checkbox **not** checked. Click here for more information.

Patients > 90 days and Patients > 180 days
These report lists all patients that have been in rehab over 90 or 180 days. You can sort the report by clicking on each column. You can have the report show all patients that are within one month of the number of days (90 or 180) by selecting the **Show patients within 1 month...** checkbox. This allows you to request a rehab extension ahead of time.

To automatically create an email listing details of all patients currently displayed, press the **Send report email** link. This will create an email that you can edit if needed and send to the appropriate authorities. Each patient reported in the email will automatically be marked as "**reported**" by the addition of a special "already reported" patient attribute.

In addition, you can choose to see only those patients that have not been reported yet by checking the **Only show unreported patients** checkbox.



Recent releases
These report lists all animals that had been released within a user-supplied date range.

Training - staff
If enabled, this report displays the training records for staff members. See the Address Book for more information.

Training - volunteer
If enabled, this report displays the training records for volunteers. See the Address Book for more information.

Upcoming releases
This report lists all patients that are currently in rehab but have the **RELEASE APPROVED** checkbox checked.

Upcoming vet checks
This report lists all patients with a veterinary check scheduled in their treatment plan.

USDA reports
These reports are for submission to the USDA. There is a Snapshot report that lists the current inventory, and admission report that lists all admissions in a user-specified time period and a dispositions report that lists all final dispositions in a user-specified time period. Only species with a non-blank value in the **USDA category** field are included in this report.

View last record entries
This report lists the last entry made **today** for each patient. You can select either **Rehab** or **Permanent resident** and either **Diurnal** or **Nocturnal**. This report is useful as an end-of-day check to make sure each patient has received the proper treatment or food.

Waiting for consult
This report lists all patients (in rehab or permanent resident) that have a specialist consult scheduled in their individual treatment plan. Click here for more information.

Other client and state-specific reports
This area in the **Reports** menu contains reports that were specifically designed and implemented for a specific client and/or state Some may or may not be available in your installation.

Becky's Data Export Tool
This tool is similar to the **Advanced Search Tool** in that you can specify all sorts of search criteria. However, it also exports physiologic data collected at

admission and release such as weights, PCV, total solids and temperature. The query can be limited to only those animals with a “Vet entry”.

California permit reports

Department of Fish and Wildlife Rehabilitation report
Department of Fish and Wildlife Quarterly report

Census reports

Annual census report
Aquarist habitat census report
Exhibit census report
Habitat census report
Habitat census report with id tag/band information

Chemotherapeutic exposure report

Cold stun report

This report is for the NC Wildlife Resources Commission and is used to report cold stun admissions of endangered sea turtles.

Collection site report

This report will lookup where specific species where collected and is most useful for aquariums to determine where species have been collected in the past. This report uses the **Collection site name** as a key. If lat/lon coordinates where also saved for the collection site, then an animal will be included in this report.

A list of each species found at each site is displayed. The list can be limited to various species and/or species groups. Once the list is configured to display the species of interest, the results can be saved to a Google map or viewed directly.

Create float plan

Create scientific collection notification

Create transfer agreement

This command generates an Animal Transfer Agreement using a predefined template. The agreement is created in several steps.

1. A list is presented with all recent (i.e. in the last 7 days) transfers. The user can select individual animals or all animals in the list.
2. The user is then asked to choose the recipient from the address book.
3. The agreement is created and saved for further editing or printing.

Email active patient list

HMS interim report - Highly migratory species *monthly* report
HMS annual report - Highly migratory species *annual* report

Illinois endangered/threatened species permit report.
This report is used to transfer or dispose of a deceased endangered or threatened species. It will prompt you for a transfer or disposal. If transferring, you will be prompted to choose a destination contact from the Address Book. If disposing of a body, it will prompt you for a short explanation.

JD's bird count - This report tallies various categories of waterfowl currently in care and breaks each species down by age at admission.

North Carolina permit reports
- Sea turtle census report
- Reptile/amphibian possession report
- Wildlife collection report
- Wildlife captivity report
- Collection report - This report allows the user to specify the year and the species group(s) to include on the report.
- Endangered species report
- SECP report - The North Carolina Scientific or Educational Collection Reporting Form report includes all collections of salt-water species for a given year.

Outstanding disposition letters report
This report will list all animals that were admitted and had an answer of **YES** for the **fourth** admission question. This question typically asks if the finder would like to be notified about this animal's progress. This list will display information about the animal including its current status and the number of days since admission. You can select any or all of the animals in the list, then press the **Send email** button. An email will be automatically formatted and addressed. You can review, edit and send each one as desired. Note: the animal must have an email address for the finder or person of concern listed in its medical record for an email to be generated. If no email is found, an error message will be displayed. Once the email is sent, the **Disposition letter sent** checkbox is checked in the animal's chart. This checkbox makes sure that it will not show up in this report the next time you run it.

You can also press the **Mark as sent** button. This will simply check the **Disposition letter sent** checkbox in the animal's chart without actually sending the email. This is useful, if the person in question has already been update via some other means.

OWCN report
This report is used to bill the OWCN network for costs incurred when treating oiled birds. The user is prompted for a date range. The following criteria are used to determine which animals will be included in the report:

- The animal must have the “Oiled” problem
- The animal must have the “OWCN included” equals true attribute. This attribute is automatically added when the “Oiled” problem is added to an animal’s chart. It is also added automatically during a **Group Add** if the **Include on OWCN report** checkbox is checked. Therefore, it is possible to have an oiled animal that is NOT included on the OWCN report.
- The animal completed it’s OWCN billing period in the specified date range. A maximum of 21 days is billed on an OWCN report even if the animal was in rehab for longer than 21 days. There are several circumstances to consider:

Circumstance	Include
Animal in rehab < 21 days	No
Animal in rehab > 21 days	Yes
Animal finalized before start date	No
Animal admitted after the end date	No
Animal admitted on or before the start date and finalized on or after end date. This is basically all animals that were in rehab during the report period.	Yes

Information regarding oiling (i.e. Oiling signs and % oiled) that was recorded during the physical exam will b e included on the report. However, this information is not mandator. The intake examination will normally result in the following text entered into the medical record:

```
------------- PHYSICAL EXAM FINDINGS ---------------
Oiling signs : Visible
% oiled : 2-25 %
```

The notification date column is filled with the value stored in the animals **OWCN notification date** attribute. The **Daily cost** (in water **less** than 75%) is based on the species **Cost category**. The **Daily cost** (in water **greater** than 75%) is 50% of the dry cost.

PAWS vet procedures report

Print curator summary

Refused food report
This report lists all resident/rehab animals that have special key phrase in any entry. The entries that it looks for are of the following format:

```
REFUSED FOOD: blah, blah blah
...
```

The search can be limited by animal name, species and by the number of days into the past. You can double-click on an animal row entry to open the animal's chart or double-click on an actual dated item to go right to that entry in the chart.

Search for anesthesia records
This report lists all animals (both live and finalized) that have special key phrase in any entry. The entries that it looks for are of the following format:

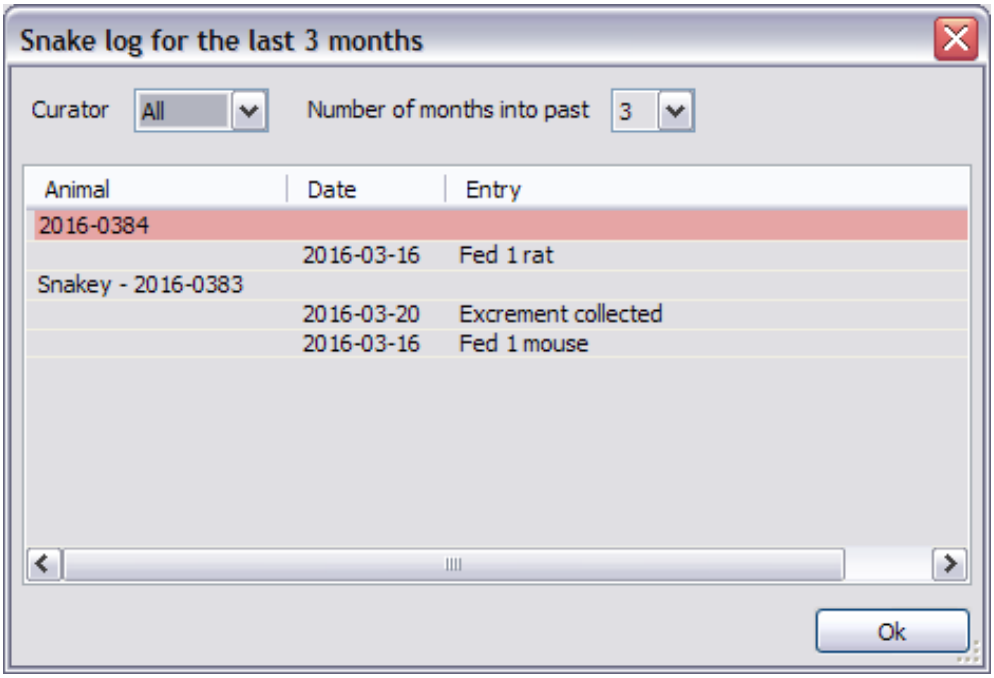
```
= ANESTHESIA RECORD =
...
```

The search can be limited by species and by the number of days into the past. You can double-click on an animal row entry to open the animal's chart or double-click on an actual dated item to go right to that entry in the chart.

Snake log
The snake log report list all resident animal snakes. It searches the medical record for keywords and the goal is to highlight those snakes that have been fed but have not produced feces. You can filter your search by animal's name and/or look at a specified number of months into the past. The report will list the animals id number and name as well as each relevant entry. The entries that it looks for are of the following format:

```
SNAKE LOG: Fed ...
SNAKE LOG: Excrement ...
```

Animals will be highlighted that have a **Fed** entry but do not have an **Excrement** entry afterwards. You can double-click on an animal's id to open it's chart.

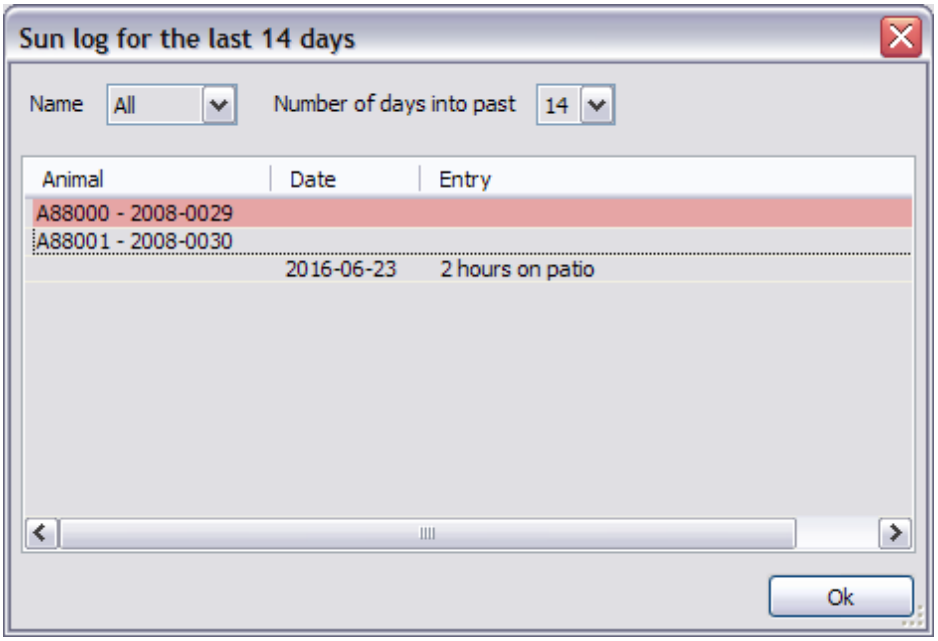


Sun log

The sun log report list all resident animal that have been specified as needing regular sun exposure. To include an animal on this list, it must have an **`Include in sun log`** attribute set. See **Attributes** for more details. For each animal on the list, this report searches the medical record for certain keywords and it highlights the animals that have not had sun exposure in the last X days. You can filter your search by animal's name and/or look back a certain number of days into the past. The report will list the animals id number and name as well as each relevant entry. The entries that it looks for are of the following format:

```
SUN LOG: 2 hours on the patio
...
```

Animals will be highlighted if a `SUN LOG` entry was **not** found in the specified number of days. You can double-click on an animal's id to open it's chart.


Sun log for the last 14 days
Name
All
Number of days into past
14
Animal
Date
Entry
A88000 - 2008-0029
A88001 - 2008-0030
2016-06-23
2 hours on patio
Ok

Chapter 5

Group operations
Advanced search tool
Query tool
Address book
Event planner
Cost estimator
Document repository
Handler training log
Transporter text messages
Inventory manager
Program log
Client manager
Surplus/wishlist manager
Spill manager
Program scheduler
Genealogy tracker
Egg tracker
Donation manager
Custom automated alerts

Group operations

The group operations allow you to perform various functions on a whole group of patients at the same time. They are accessed by choosing **Tools ▶ Group operations** from the main menu or by right-clicking on a specific location in the **Enclosure list** on the main screen and choosing **Group Operations** from the popup menu. A form will appear that allows you to select the **id numbers** of the animals you want to work with.

If you access the group operation functions by right-clicking on an enclosure, then the list of patients will be automatically filled with all the patients in that enclosure.

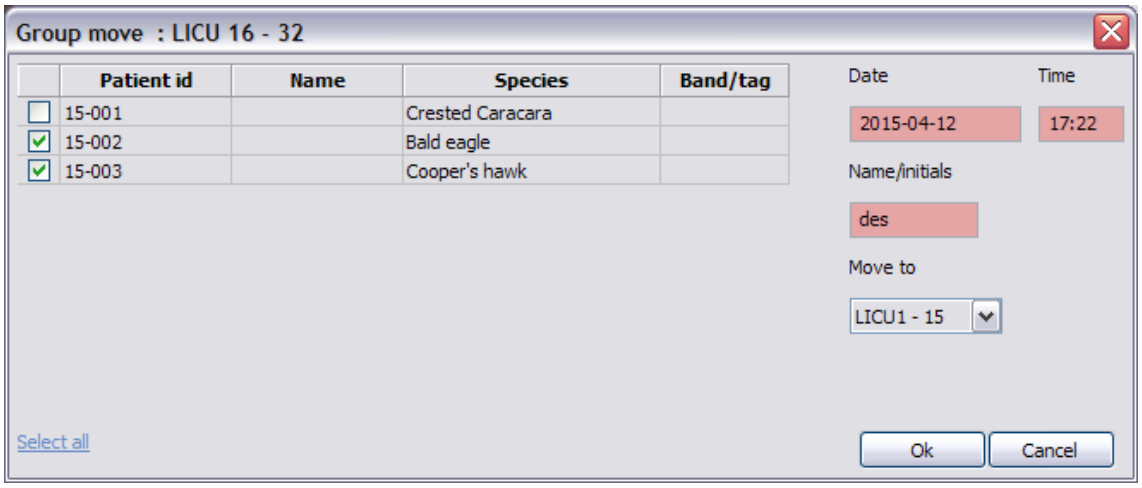
If you access the group operation functions from the main menu, you can do a group operation that affects animals in multiple enclosures at once. However, the animal list will initially be empty. You can manually enter the id's of the animals you would like to work with. Or, to make this a little easier, you can select a particular species from the species list and the list will auto-fill with all animals of that species that are currently alive in the collection (status **Reh** and **PR**). Because each animal is listed with its name, status and location, you should be able to select just the animals you are interested in. In addition, you can check **Include past animals** to include animals that are no longer in the collection in the list. You can select the blank option for species to clear the list or **ALL** to select all animals in the collection.

Regardless of how you access the group operations, just check the boxes in the first column for the rows of the animals that you want to modify. Press the **Select all** link to automatically select all animals in the list. There are fields to enter the date and time for the operation. They default to today and now but you can back date them to record something that happened in the past. Many of the group operations allow you to specify the type of record entry that will be created. That is, you can specify whether the entry will be a **Normal** entry, a **Vet** entry, an **Important event** or any other type of entry that you have defined in your system.

Groups of animals can be moved, released, transferred or added. In addition, you can change the various properties of multiple animals in a group using the Set Properties command. You can also add enrichment and training records, program usage logs, problems, photographs and fecal exam results for groups of animals. Finally, you can also make a text entry for all or some animals in a group.

Move

After making your selection in the patient list and entering your initials, choose the new location to move the patients to and press the **Ok** button.

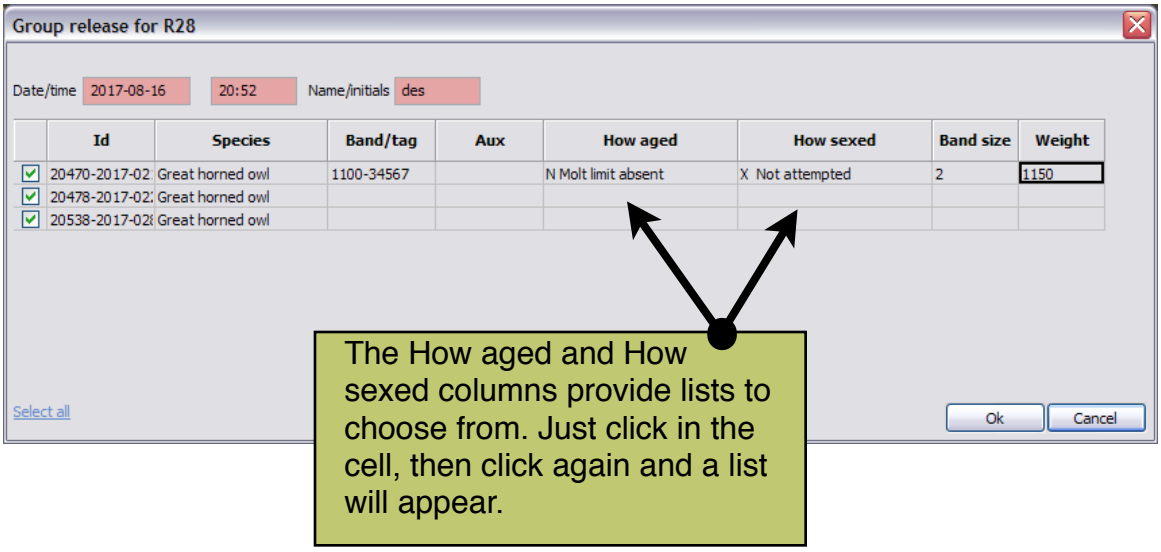


Release

The **Group Release** function will allow you to release animals with or without recording federal bands and auxiliary markers. If federal banding is enabled on your system, you will be first prompted as to whether you are banding these animals.

If you choose **No**, then the standard group operation list of animals in the enclosure is presented. After making your selection in the animal list and entering your initials, press the **Ok** button. The **Release** form will be displayed. Fill it out accordingly and press the **Ok** button.

If you choose **Yes**, then a more complicated list is presented. You still must select which animals to release but there are also columns for you to provide the band number, auxiliary marker (if used) and several other bits of information that are required when banding an animal for release. The **How aged** and **How sexed** columns cannot be edited directly. If you click on then, a drop list will appear so that you may make a choice from a set list of options. After making your selection in the animal list, entering the require data and entering your initials, press the **Ok** button. The **Release** form will be displayed. Fill it out accordingly and press the **Ok** button. Note that this form is simplified and does not include all the band/tag fields as that information was provided in the previous step.



Transfer
After making your selection in the patient list and entering your initials, press the **Ok** button. The standard **Transfer** form will be displayed. Fill it out accordingly and press the **Ok** button.

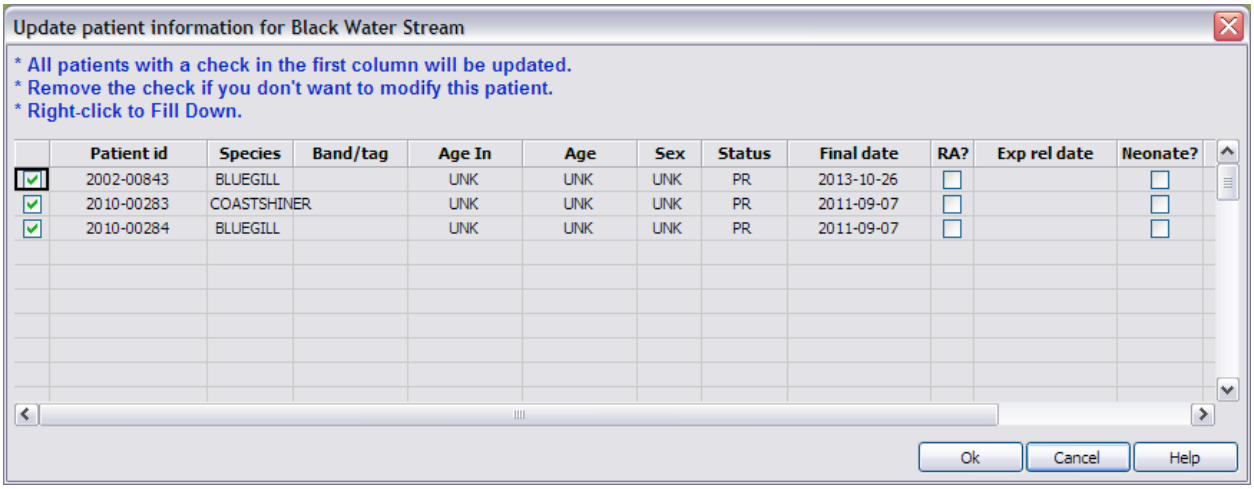
Set animal info
This function allows you to simultaneously set/modify several different properties for multiple animals in a specific location. The following properties can be set:

- Band/tag
- AgeIn - choose from the list that will appear when you click in cell
- Age - choose from the list that will appear when you click in cell
- Sex - choose from the list that will appear when you click in cell
- Status - choose from the list that will appear when you click in cell
- Final date - enter in yyyy-mm-dd format. Note that this field must be filled in with a valid date if you choose a **Status** that requires a **Final date**.
- Release approved - check the box for if applicaable
- Expected release date - enter in yyyy-mm-dd format
- Neonate - check the box for if applicable
- Keywords - anything entered here will be **appended** to the patient's current list of keywords.

Note: in order to modify a patient, you must place check the box in the first column. To leave a patient unchanged, clear the check box. Also note that the **Patient id** and **Species** columns are for informational purposes only. They cannot be modified here.

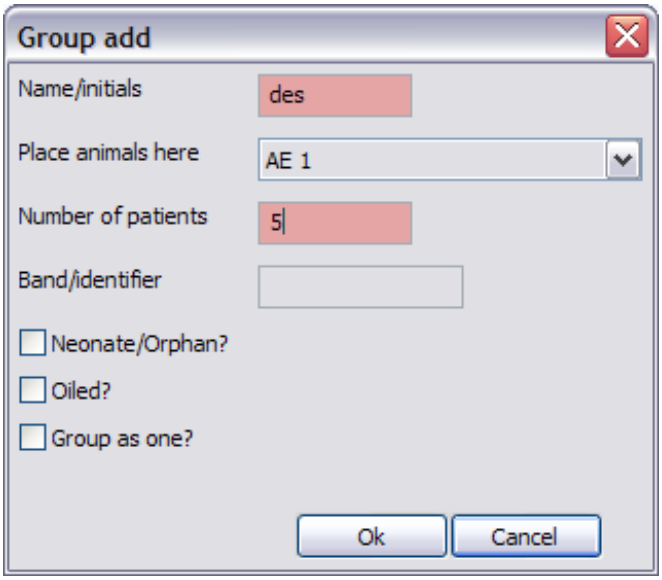
You can **right-click** on a cell and choose **Fill down** to copy the cell's value to all cells below it.

After making your selection in the patient list, press the **Ok** button.



Add

The **Group Add** function is slightly different than the other group operations since a list of animals is not presented. In this case, you must specify how many animals you want to add and where they are going to be located. You can also specify a band/tag number if each animal is to be identified the same way.



There are the following check boxes:

- **Neonate/orphans** - if this is checked, then Neonate/orphan checkbox in the animal's chart will be automatically checked and the specified values for the age, cause of injury and initial problems will be automatically set for you.
- **Oiled -** if this is checked, then **Oiled** will be added as a problem.
- **Group as one** - if this is checked, then a single **GROUP** animal will be added. See Update Census command for more information.

Once you do this, the normal **Add animal** form is presented. After filling out that form, the specified number of new patients will be created with sequential **id numbers** and they will automatically be placed in the specified location. Any number of animals can be

added but you will be prompted to confirm the operation if you enter a number larger than 10.

Note that you still have to setup a treatment plan for these new animals.

Enrichment
After making your selection in the animal list and entering your initials, press the **Ok** button. The standard **Enrichment** form will be displayed. Fill it out accordingly and press the **Ok** button.

Training
After making your selection in the animal list and entering your initials, press the **Ok** button. The standard Training form will be displayed. Fill it out accordingly and press the **Ok** button.

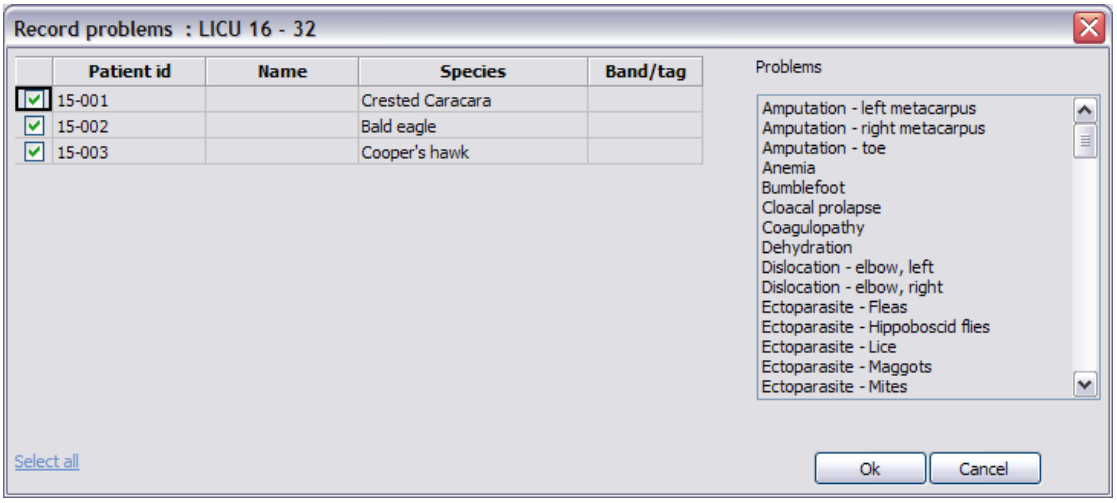
Program usage
This function may appear differently depending on how recent your system was installed.

For older installations: Only animals with the **Program animal** checkbox checked will be listed. If you choose this function from the main menu, then all program animals will be listed. After making your selection in the animal list and entering your initials, press the **Ok** button. The standard **Program Log** form will be displayed. Fill it out accordingly and press the **Ok** button.

When you are recording a program log for more than one animal, you will be prompted as to whether you want to split the number of people present at the program between all the animals evenly or use the entire number for the log entry for each animal. For example, if 4 animals went to program with 100 people, you have the option of recording 100 people in each animal's log entry or just 25. It really depends on how you do your record keeping and how your reports need to reflect the number of people present.

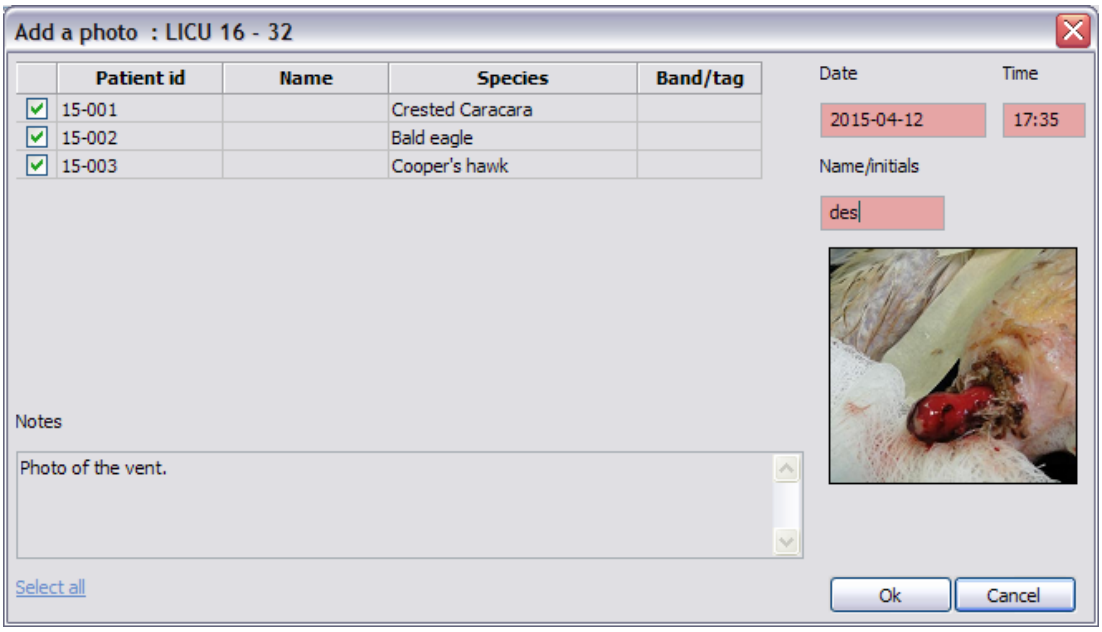
For newer installations: The form appears as is described here in the **Program Manager** section. The only difference here is that you can specify the number of programs so you can record that the selected animals did more than one program on a specified day.

Problems
Making your selection in the animal list. Select one or more problems from the problem list and the press the **Ok** button.



Photograph

Make your selection in the animal list. Then drag and drop an image/photograph onto the image viewer area. A popup will allow you to crop and resize the image. You can make a notation and the press the **Ok** button.



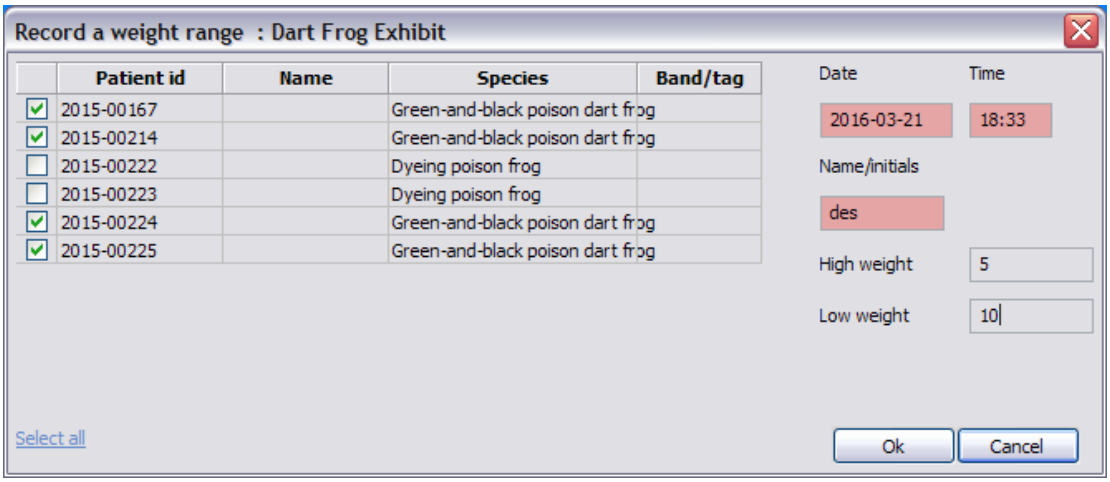
Fecal

After making your selection in the animal list and entering your initials, press the **Ok** button. The standard Fecal form will be displayed. Fill it out accordingly and press the **Ok** button.

Vaccines
After making your selection in the animal list and entering your initials, press the **Ok** button. The standard **Vaccination** form will be displayed. It allows you to select the type of vaccine, the date administered as well as the route and volume. Fill it out accordingly and press the **Ok** button. A vaccination record will be added to each animal's chart.

Weight range
Often individuals in groups of animals cannot be uniquely identified. In this case, the lowest and highest weight in the group can be recorded and graphed. This allows you to spot trends without actually knowing individual weights.

After making your selection in the animal list and entering your initials, enter a **high** and a **low** weight entry. You can also enter an optional **median** weight. Press the **Ok** button. This will make a weight range entry in the chart for each of the selected animals. The group weight range data can then be view in the Historical Data Viewer.



Questionnaire
After making your selection in the animal list and entering your initials, choose a **Questionnaire** and press the **Ok** button. Fill out the questionnaire accordingly and press the **Ok** button.

Set disposition
After making your selection in the animal list and entering your initials, choose a **disposition** and press the **Ok** button. Be sure to set the date correctly. All selected animals will be updated accordingly.

Exam
After making your selection in the animal list and entering your initials, press the **Ok** button. Fill out the exam form accordingly and press the **Ok** button. The examination will be appended to each animal's record. Since each type of animal can and probably has a different exam form, the group exam can be a problem if the list of animals in this group exam are of different species groups. In this case, the correct exam form for the first animal in the group will be used. So if you list of animals has two birds, a turtle and a mammal, the exam form for the first animal in the list will be used.

Automated paperwork

RaptorMed can automate much of the routine paperwork that is required by the US FWS. To access these functions, right click on the patient in the **Patient List** on the main window and choose **Paperwork**. The following functions are automated:

- Send **Special Species Admitted** email - The USFWS must be notified when any of the species of interest (such as eagles) are admitted into a rehabilitation facility. This function automates the process. A form will be displayed with an email message pre-written to contain the specific information about the patient of interest. The email is pre-addressed to your USFWS representative and is based on a template that you can edit to suit your needs. You can edit the message if needed and press the **Send** button to send the message. These messages are only sent for animals in a rehabilitation setting, not for animals that are permanent residents in a collection. In addition, these messages are only sent for species that are marked as a species of concern either at the state or federal level. See the Species editor for more information. When a special species is admitted as a rehabilitation patient, a daily repeating reminder is created in order to remind you to report this admission.

- Send **Illegal Cause of Injury** email - The USFWS must be notified when a patient is admitted as a result of illegal activity such as gunshot. This function automates the process. A form will be displayed with an email message pre-written to contain the specific information about the patient of interest. The email is pre-addressed to your US FWS representative and is based on a template that you can edit to suit your needs. You can edit the message if needed and press the **Send** button to send the message. The list of causes of injury that should be considered illegal can be configured as needed. These messages are only sent for animals in a rehabilitation setting, not for animals that are residents in a permanent collection. When an animal with an illegal cause of injury is admitted as a rehabilitation patient, an daily repeating reminder is created in order to remind you to report this admission.

- Send **Status** email - This function allows you to quickly send a patient status update email. A form will be displayed with an email message pre-written to contain the specific information about the patient of interest. The email is pre-addressed to the

address specified in the patient's finder information. If no address was specified, then you can manually enter an address. You can edit the message if needed and press the **Send** button to send the message.

- **Send other emails** produces a form that allows the user to choose which of many pre-formatted emails. Choose from the **Function** list. The **To**, **Subject** and message body fields will be filled in. Edit as needed and press the **Send** button to send the message.

- Create **Transfer Request** - An official USFWS **Transfer Request worksheet** must usually be submitted before a non-releasable animal can be transferred. This function creates a worksheet for you based on a pre-installed template. You will be prompted for a folder where the new worksheet will be saved. Once it is saved, you can double-click on it to open and edit it before submitting it to your USFWS agent.

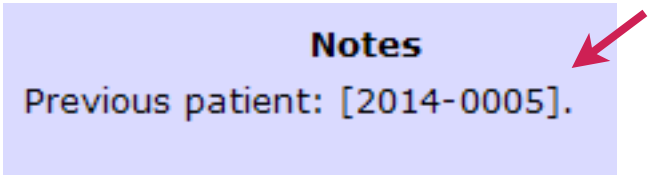
- Write **Non-Releasability Letter** - A letter of non-releasability from a veterinarian is often required before a non-releasable animal can be transferred. This letter is typically addressed to the recipient from the veterinarian representing the organization transferring the animal. This function creates a new letter for you based on a pre-installed template with the patient's information plugged into it. You will be prompted to choose an recipient from the **Address Book**. You can choose an existing entry from the **Address Book**. If the recipient is not in the **Address Book**, then press the **Cancel** button and the recipient area in the letter will be left blank for you to manually edit. You will then be prompted for a folder where the new letter will be saved. Once it is saved, you can double-click on it to open and edit it before sending it to the recipient.

- **Report Band** - This function simply opens a web browser to the USGS Bird Banding Lab Band Report web page.

- **Print admission receipt** - This function will print a receipt for the person delivering the animal. It has details about the animal as well as any donation that may have been given.

- **Link to previous patient** - This function is used to record a band report/sighting (when a new patient is admitted that was previously released with a band or tag). After the new patient is entered and it's found location has been recorded (ideally including the exact latitude and longitude), choose this command. The database will be searched for a previous patient with the same band or tag. The search will attempt to match either the metal federal band or an auxiliary marker. If a match is found, the following will occur:
  - A band report record will be created based on the found location of the new patient and it will be attached to the ***previous*** patient.
  - The ***previous*** patient will be marked as a **BAND RETURN**.

- A notation (arrow) will be added to the ***new*** patient indicating the id number of the previous patient. This id number notation is a hotlink that allows you to open the previous patient's record simply by clicking on it.
- Similarly, a hotlink notation will be added to the ***previous*** patient indicating the id number of the newly admitted animal.

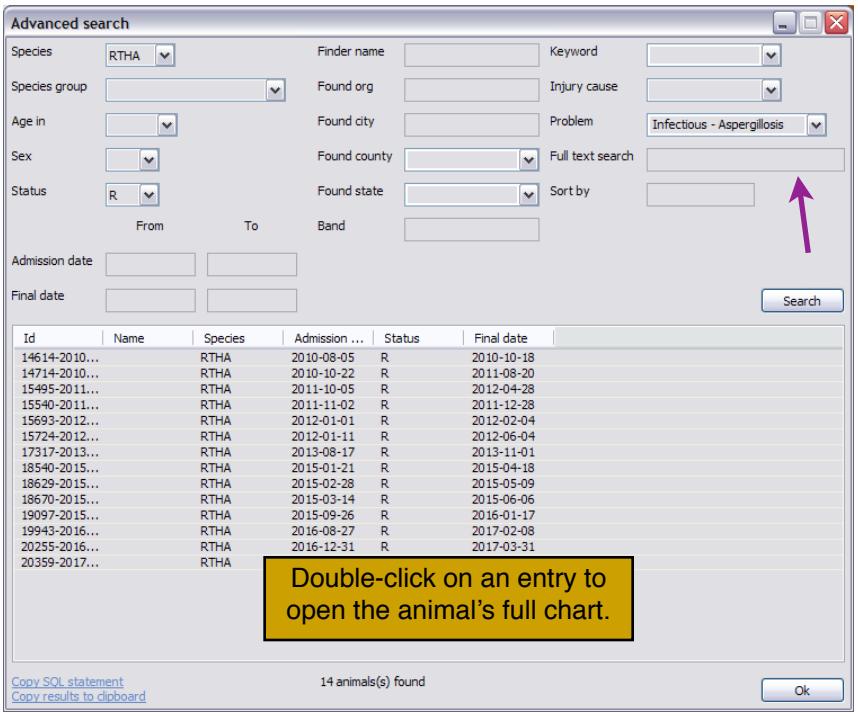


- **Save old band** - This function will save the current band number to an **Attribute** in the animal's record. This is useful to store banding history especially when an old band is removed and replaced with a new band. Note that the current band will be automatically saved if a **Release record** is created/saved with a different band number.

These email functions should have been configured and tested when the system was installed. Please contact customer support if you encounter any problems.

Searches and queries

Advanced Search Tool
This tool allows you to search for and find past patients based on a whole range of parameters. It is accessed by choosing **Tools ▶ Advanced search tool** from the main menu. You can specify many different parameters to narrow your search. Once you have specified your search criteria, press the **Search** button. The results will be displayed in the spreadsheet and the number of patients found will also be displayed.



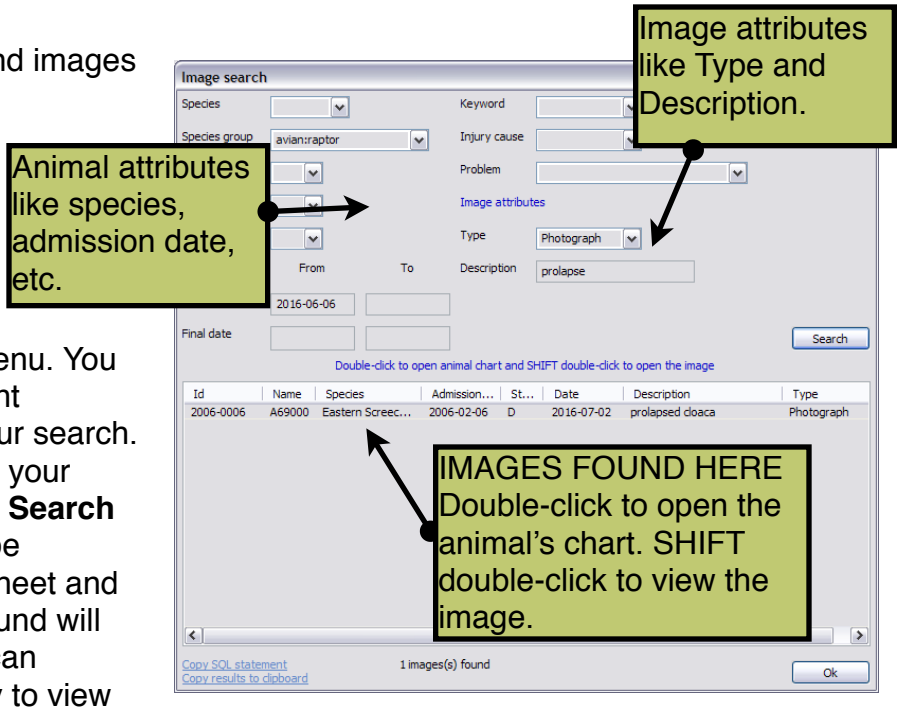
The following fields do **NOT** have to be an exact match: **Finder name**, **Organization**, **Keyword,** and **Problem.** The results will be sorted by **animal's Id** unless you specify a different column name in the **Sort by** field.

You can also enter text in the **Full text searc**h (**purple** arrow) to look for any matches in any of the animal's record entries.

You can copy the results to the clipboard to use in another program by clicking the **Copy results to clipboard** link.

Image Search Tool

This tool allows you to find images based on various attributes of the animal as well as the type of image and the image description. It is accessed by choosing **Tools ▶ Image search** from the main menu. You can specify many different parameters to narrow your search. Once you have specified your search criteria, press the **Search** button. The results will be displayed in the spreadsheet and the number of images found will also be displayed. You can double-click on any entry to view the animal's chart or **SHIFT** left-click to view the actual image.



You can copy the results to the clipboard to use in another program by clicking the **Copy results to clipboard** link.

Band lookup

This tool is accessed by choosing **Tools ▶ Lookup band/tag** from the main menu. It allows you to find an animal based on the information in it's band/tag field.

Lookup by legacy id or group number

This tool is accessed by choosing **Tools ▶ Lookup by legacy id or group** from the main menu. It allows you to find an animal based on the id number that it had in the original database prior to being imported into **RaptorMed**. This information is stored as a patient attribute but the actual name of the attribute depends on the customer and the previous database.

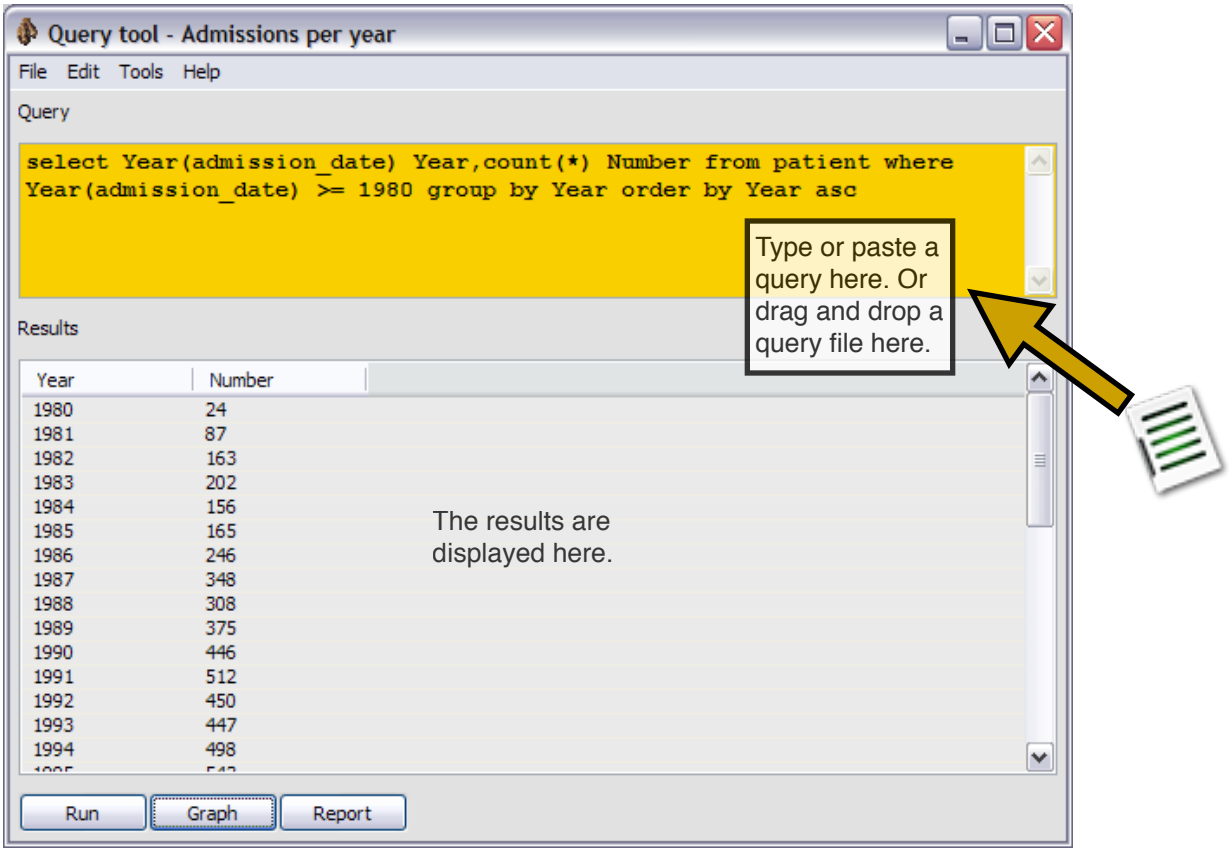
The Query Tool

The query tool is a very powerful utility that allows you to pose very complex queries to the database. It allows you to mine your data in ways never before possible and it can create beautiful graphs with just a few mouse clicks. This tool is accessed by choosing **Tools ▶ Query tool** from the main menu. Here are some example queries:

- Show me all red-tailed hawks that were admitted in 2010 from Gaston county, NC with an ulna fracture.

- What are the admission trends in bald eagles since 1980?
- What was the outcome of all patients treated with experimental drug X?
- How has our surgical time for humerus fracture repairs improved over time?

Queries of this type require in-depth knowledge of the internal database structure. Because of this, you will likely need assistance from customer support. So, send us a question you would like answered and we will create a custom query. The query file can then simply dragged and dropped on to the query form.

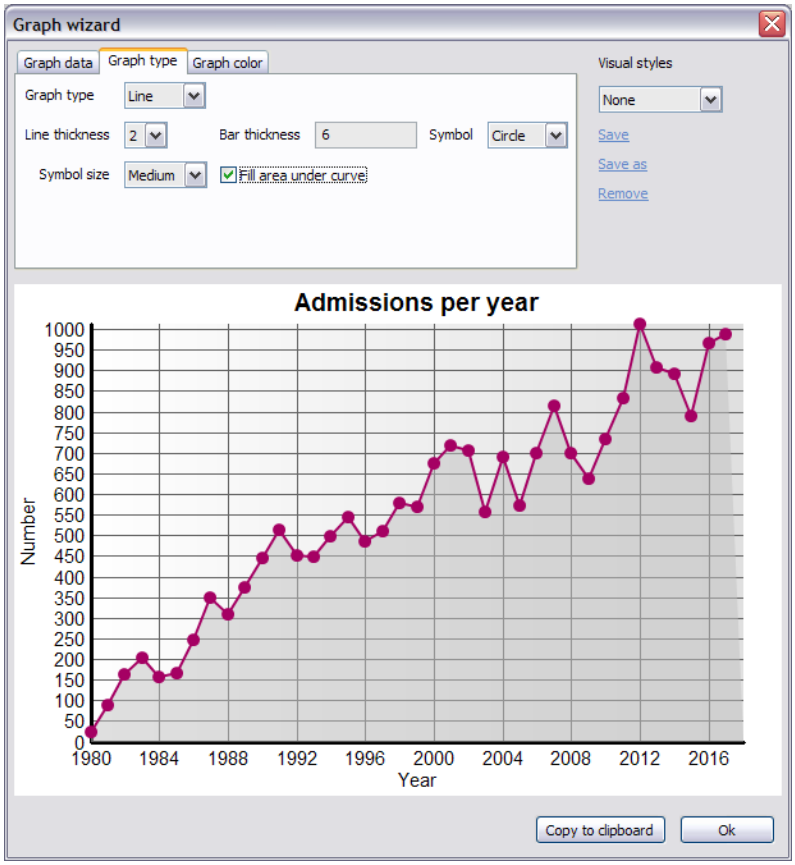


You can also type or paste the query text into the edit field at the top of the form. After you press the **Run** button, your results will display in the **Results** spreadsheet at the bottom. You results can be copied to the clipboard and then pasted in Excel or any other Windows application. To copy the results to the clipboard, **Edit ▶ Copy results to clipboard** from the menu.

Queries can also be saved for later recall. Under the **File** menu, there are choices to **Open**, **Save**, and **Save as**. You can also **Delete** or **Rename** the currently loaded query by using the corresponding commands under the **Edit** menu.

Your data can be printed to a report by pressing the **Report** button. You will be prompted for a report title, then the report is displayed in the Print Preview form.

Your data can also be graphed using the **Graph Wizard**. Once you have run your query and have your results listed in the **Results** spreadsheet, press the **Graph** button and the **Graph Wizard** will appear. The wizard has three tabs that allow you to modify the appearance of the chart.



Tab 1 allows you to specify:

- The title
- The text labels for each axis
- The starting value and increment value for each axis. The increment value determines how far apart the horizontal and vertical lines are spread.
- The number of points to include in your graph. If you dataset has 50 points, you can choose to graph just the first 25, for example.

Tab 2 allows you to change:

- the graph type (line, bar, scatter, pie)
- The line and bar thickness for line and bar graphs, respectively.
- The symbol shape (square, x, circle, cross or no symbol) and size for line and scatter graphs.
- You can also specify whether to fill the area under the curve for line graphs.

Tab 3 allows you to specify the various colors. Double-clicking on each square in the color palette. If you hover your mouse over each square, a tool tip will appear that tells you what the color is for.

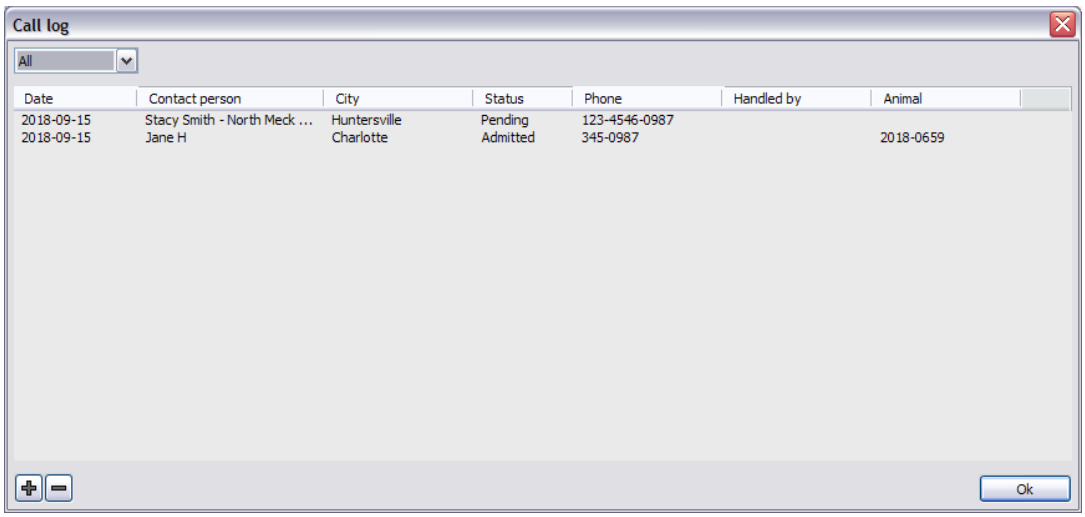
Once you are happy with the graph's appearance, press the **Copy to clipboard** button to save the chart to the Windows clipboard. You can then paste it into another document like Word or Powerpoint.

Note: in order to use the **Graph Wizard**, the query must be formulated such that the values for the X axis are in the first column and the values for the Y axis are in the second column. If you data is not presented in the correct order, you can modify the query to fix it or press **Swap axes** on the first tab.

If you have color scheme that you like you can save and recall it for later use. You can select a color scheme by choosing it in the color scheme list. If you make changes, you can save them by pressing the **Save** link or save them into a new color scheme by pressing the **Save as** link. You can remove the currently selected color scheme by pressing the **Remove** link.

Pre-admission Call Log

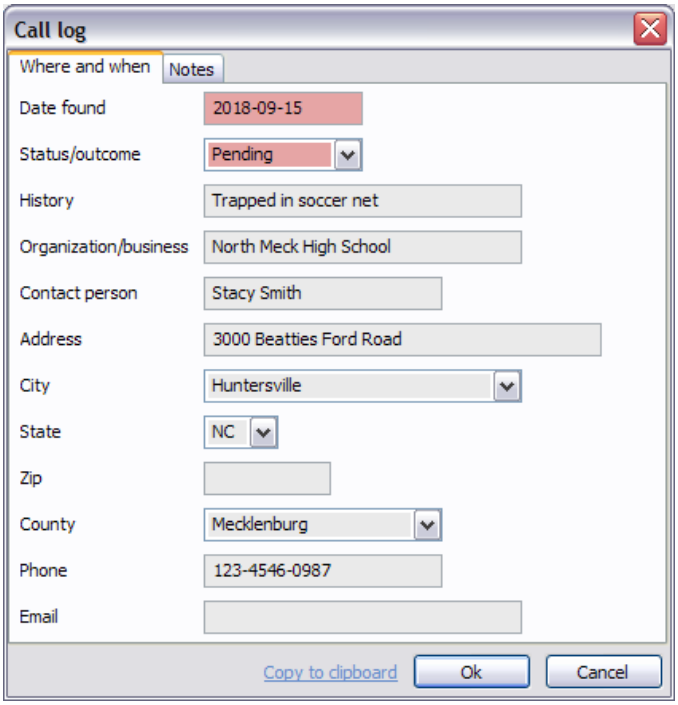
If enabled, the Pre-Admission Call log is accessed by choosing **Edit ▶ Call log** from the main menu. This feature allows you to record phone calls that are handled before an admission is made. Some calls may result in an admission but many calls are not and the call log allows you to keep track of the status of each call. The main screen has a list of all calls and you can filter them by their current status. By default, only calls of status **Pending** are displayed.



When a new call is logged, its status is **Pending**. If the call is determined to be in need of service, a person is assigned to the call and its status becomes **Assigned**. From there, the call either results in the admission of a new animal and the status would then become **Admitted**. If not, the call would be closed and its status would be changed to **Closed** or any number of other possibilities such as **Referred**, **Cannot find**, **Flew off**,

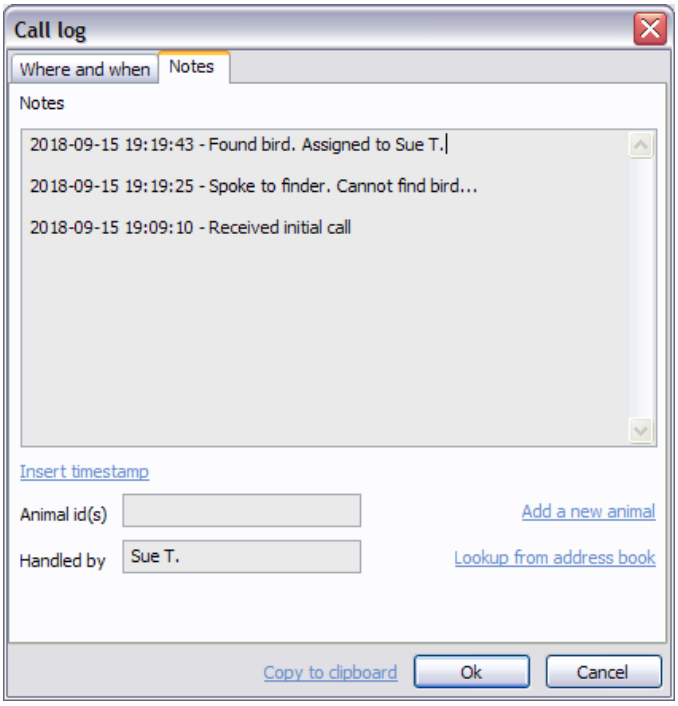
etc. You can specify any number of choices for this using the **list choice editor.** Note that you can choose a status of **All active** and that will display all calls the are **Pending** or **Assigned**.

To add a new call, press the **+** button. To delete the selected call, press the **-** button. The new call form has two tabs. The first tab allows you to record contact information and to change the status. The status is automatically set to **Pending** for new call.



The second tab allows you to record notes about the initial call and any follow-up calls. Press the **Insert timestamp** link to insert the date and time at the top of the log. Then record your notation.

If the call needs to be handled, enter the name of the person assigned in the **Handled by** field. You can also record and **ETA** if known. If this is a volunteer or somebody already in the **Address Book**, then press the **Lookup from address book** link. If the call is assigned, go back to the first tab and change the status to **Assigned**.

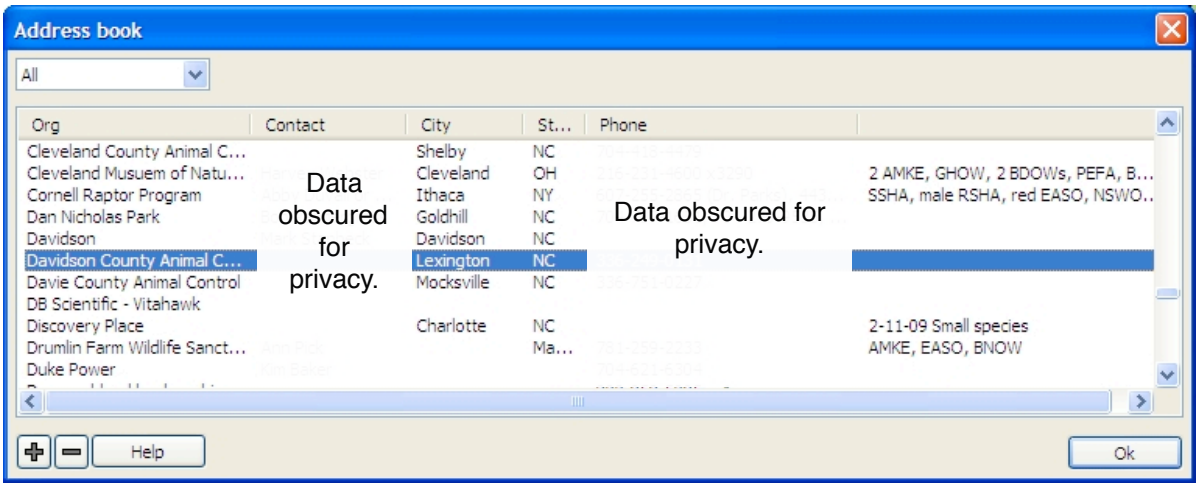


If the animal is actually admitted, change the status to **Admitted**. Press the **Add a new animal** link to create a new animal record. This will automatically copy the contact info and location from the first tab to the new animal's record. If the animal is already in the system, enter its id in the **Animal id** field.

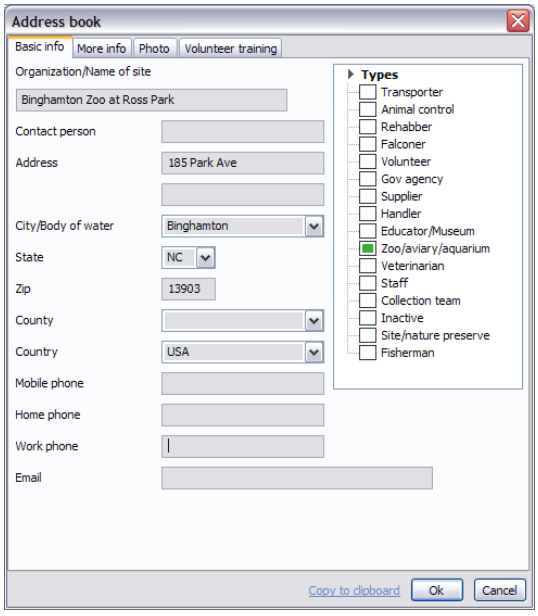
If the call did not result in an admission, change the status to either **Closed** or one of the other options such as **Flew off**, **Cannot find**, etc.

The Address Book

The address book allows you to store contact information for all sorts of things like people, places, suppliers, etc. To access the **Address Book**, choose **Edit ▶ Address Book** from the main menu.



The **Address Book** viewer lists each contact. You can sort by any of the columns and you can filter the list to show only certain types of contacts by choosing from the **Type** list at the top. You can add a new contact by pressing the **+** button, remove the selected one by pressing the **-** button or copy the selected one by pressing the **Copy** button. You can edit the selected contact by double-clicking on it.



The contact editor has several tabs.

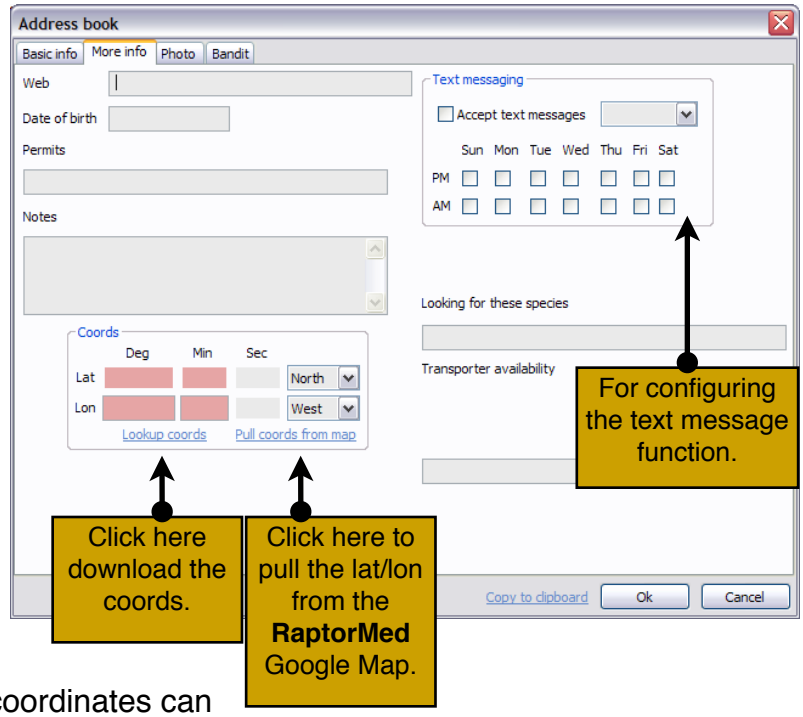
- **Tab 1 - Basic info** - This tab has fields for:
  - Contact information including multiple phone numbers.
  - The **Job description** field is an optional field that is used in the **Program Manager** to allow you to send emails to multiple contacts based on their job description. So you could send an email about a new program to all 2nd grade teachers, for example.

- Check boxes to choose which type of contact this is. The following contact types are possible. Note that more than one type can be selected, so a contact/entry could be a rehabber **and** a transporter, for example.

    - **Animal control**
    - **Arborist/tree climber**
    - **Client** - Clients that are animal owners. Used in the C**lient Manager**.
    - **Collection team**
    - **Donor** - People or organizations that have donated or have the potential to make a donation. Used in the **Donation Manager**.
    - **Driver**
    - **Educator/museum** - Educational facilities that you work with. Useful when you need to place non-releasable animals.
    - **Falconer** - Sometimes useful for rehab or for rescuing birds trapped in warehouses.
    - **Fisherman**
    - **Government agency** - USFWS, state DNR, etc.
    - **Handler/trainer** - People in your organization that handle/train resident animals. Only contacts with this check box checked will be included in the **Handler training log**.
    - **Inactive** - Used to mark this contact as inactive. This allows you to keep the contact information in the **Address Book** without having to delete it completely.
    - **Intern**
    - **Member** - Used to mark this contact as a member of your organization. This can be used to track donations or for mailing lists.
    - **Program client** - these entries will be included in the **Bulk Mailer** choice list in the **Program Manager**.
    - **Rehabber** - Rehabilitation facilities or people that you work with.
    - **Site/nature preserve** - Actual locations that you use, potentially for release sites. The **Release form** allows you to choose one of these entries so that the location information does not have to be re-entered.
    - **Staff** - Staff members at your organization.
    - **Supplier** - Suppliers for medications, food, and supplies.
    - **Transporter** - For people that can assist with rescuing and transporting injured animals.
    - **Volunteer** - Volunteers of your organization.
    - **Veterinarian** - Veterinarians that you work with.
    - **Zoo/aquarium/aviary**

- **Tab 2 - More info** - This tab has several miscellaneous fields for:
    - A web address

- Date of birth - Note: this field is only viewable by **RaptorMed** users who have **Human Resources** privileges.
- Permit information
- A field that allows you to record if a certain contact is looking for specific non-releasable animals. If you enter something here, this contact will be listed when you choose **Looking for animals** from the filter in the Address Book list window shown above.
- The **Availability** field allows you to record when, for example, a Transporter-type person is available to go out and rescue an animal. For example, you might enter something like "M-F PM + weekends" or "Any day except Tuesday".
- **Latitude and longitude** - these must be filled in if you would like to plot this entry on a Google Map (see below). These coordinates can be entered in several ways (click **here** for more information).



- Permit numbers
- The **Notes** fields is for any additional information that you would like to record for this contact.
- The **Accepts text messages** text box indicates that this Transporter contact would like to be contacted via text message when their help is needed with an injured animal. You must select a cell phone service provider from the list and the check boxes for **AM/PM** and **Sun-Sat** are used determine when it is appropriate to send a Transporter-type person a text message. Click **here** for more information.

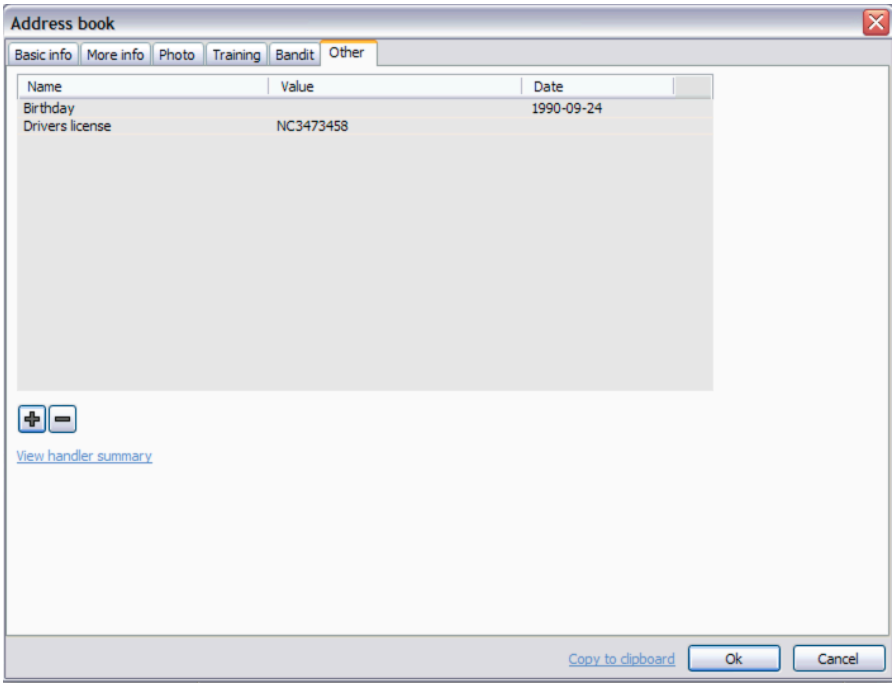
- **Tab 3 - Photo** - This tab allows you to import an image for this contact. It could be photo of a volunteer or a scan of a business card for a client or supplier. You simply drag and drop and image into the designated area. A window will popup that allows you to resize, crop and flip the image. When you have adjusted it the way you like, press the **Ok** button.

- **Tab 4 - Training** - If enabled, this tab allows you to record when a staff member or volunteer has been signed off on a certain training item. There will be a list of pre-

defined training options. Double-click to set the date from a popup calendar. To clear a date, right click and choose **Clear date**. The training data for volunteers is tabulated in the **Volunteer training** report.

- **Tab 5 - Bandit** - This tab is for entires of type **Site**. It is used to configure an Address Book entry as a release site for use when exporting release/banding information to Bandit. On this tab you must enter the **Location id** that is used in Bandit. Note that it must be spelled exactly the same as in Bandit. You must also choose the **Location precision**. Valid options are either 1 or 10 minute blocks or 0 for an exact match. See **Bandit** for more information.

- **Tab 6 - Other** - This tab allows various **attributes** to be recorded for an address book entry. An attribute is anything that has a name and a value. For example, `Birthday = 1990-02-15` or `Driver's license = NC234343.` Attributes must have a name and either a textual value or a date. Press the + button to add a new attribute, the - button delete the existing attribute or double-click an entry to edit it.



For an **Address Book** entry that is an animal **Handler**, you can click the **View handler summary** link to view a summary of this person's handler training and certifications. See **Handler training log** for more information.

- **Tab 7 - Volunteer info** - See the **Volunteer** section for more information.

- **Tab 8 - Attachments** - Any number of documents can be attached to an entry in the **Address Book**. Simply drag and drop a document onto the form or press the **+** button and browse to a file. View an attachment by double-clicking on it and delete the selected attachment by pressing the **-** button.

The **Copy to clipboard** link allows you to quickly copy an **Address Book** entry's contact information to the clipboard so it can be pasted into another application.

Contact info from the Address Book can be exported to a Google Map. Click **here** for more information.

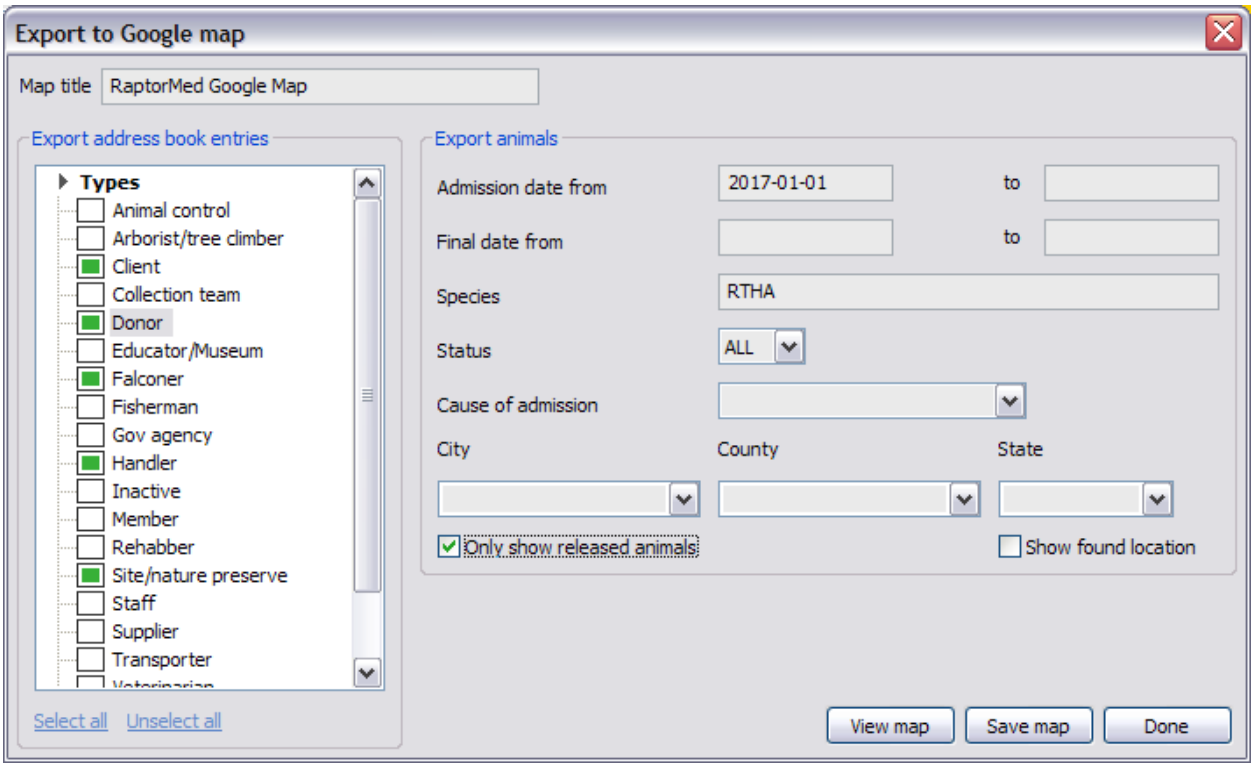
Exporting data to a Google Map

The entries in your **Address Book** and animal data can be exported to a Google Map by choosing **Report ▶ Google map** from the main menu.

A window will appear that allows you to choose what you would like to export. The types of **Address Book** entries are listed on left and various attributes about animals to export are on the right. For example, you can export all red-tailed hawks that were released after being admitted for gunshot. Address book entries and animals can be overlaid on the same map but only entries with a valid latitude and longitude can be exported and mapped. Address book entries are marked with a color-coded balloon and animals are marked with color-coded circles.

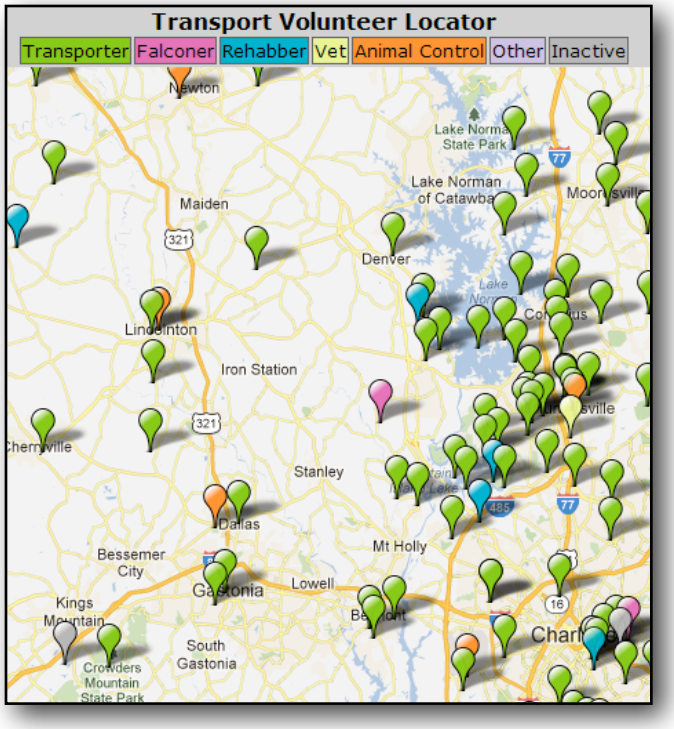
There are actually three menu command that you can use to export data:

- **Export your choice of data** - with this command the form for you to make choices doesn't have anything pre-selected.
- **Export released animals** - this is a shortcut that has the **Only show released animals** checkbox checked. It exists for backward compatibility with previous versions of the program.
- **Export address book** - this is a shortcut that has all the address book types pre-selected. It exists for backward compatibility with previous versions of the program.
-



You can also specify the title for the map. Once you make your selections and press the **View map** or **Save map** buttons. If saving a map, you will be prompted for a folder to save it into. An html file will be created. You can then double-click on it to view it in your browser. Note that Internet Explorer does not consistently support Google Maps so please use another browser such as Chrome. Each exported entry will have a color-keyed balloon and you can click on each balloon to get information about the entry.

In a wildlife rehabilitation setting, it is recommended that you export **Transporters**, **Rehabbers** and **Animal control agencies** to a map as this map will be very helpful when trying arrange for the capture and transport of an injured animal.

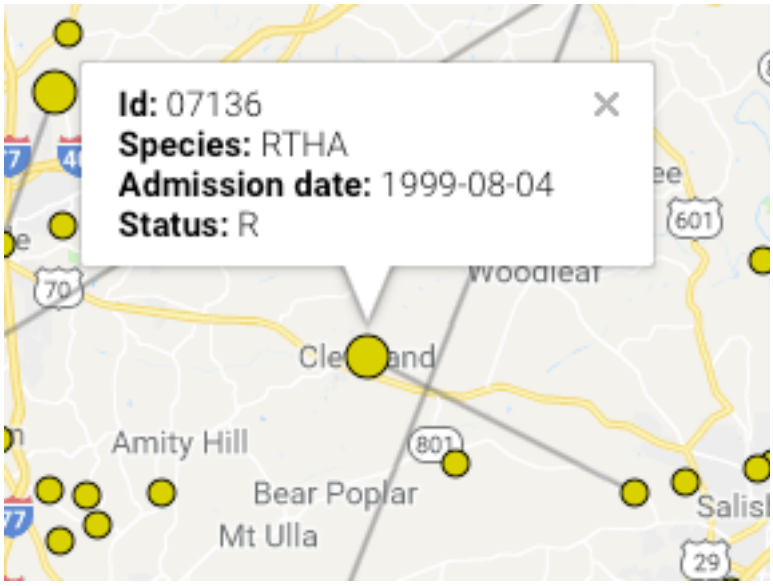


This map is also very useful as it will store the latitude and longitude in the Windows clipboard when you **double-**click on a point. Note that this feature does not work with Internet Explorer but works well with **Google Chrome**. When you double-click a point, a popup will be displayed. Press **CTL-C** and then the OK button. This will copy the coordinates to the clipboard.

The saved latitude/longitude can then be automatically imported by **RaptorMed** and is helpful when:

- Recording where an animal was found or collected
- Recording a **Release**
- Sending a text message to transport volunteers
- Recording **Band Reports**
- Creating new **Address Book** entries
- Creating an **Oil spill** log entry.

There is an option to **Only show released animals**. When you check this, the **Show found location** checkbox also becomes enabled. If checked then a marker is exported for where the animal was originally found and it is linked with a line to a marker for where the animal was eventually released. In addition, it will calculate the distance between the admission and released locations.

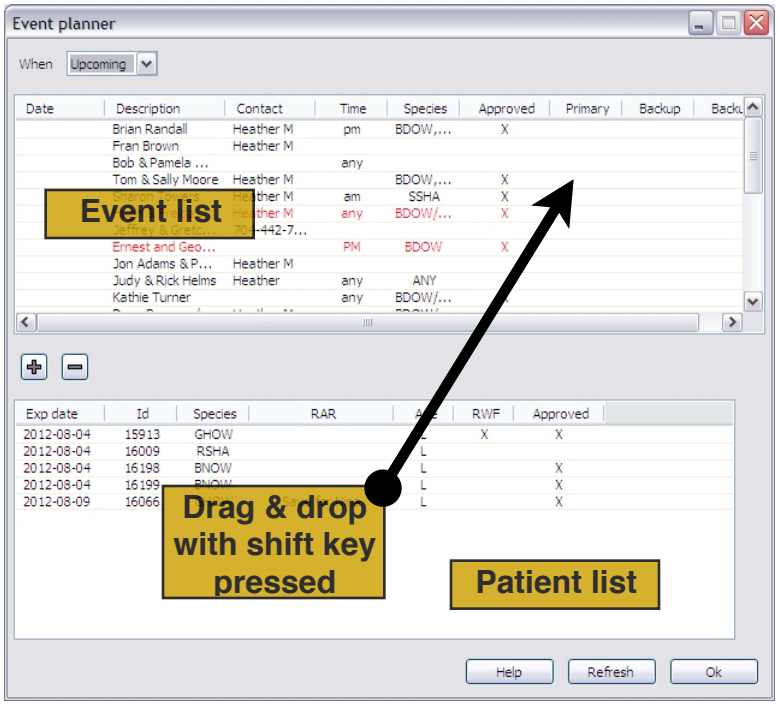


The Event Planner

The **Event Planner** is accessed from the main menu under **Tools ▶ Event planner**. This tool is great for fundraising as it helps coordinate events where you are planning to release an animal. This tool allows you to create and schedule events and match those events with animals that have upcoming expected release dates. The **Event Planner** lists all events at the top and all animals with an **Expected release date** that has been set are listed at the bottom. Remember, the **Expected release date** is only a best guess as last minute changes or delays are not uncommon. Click here for information on setting this date.

To use the tool, there are three steps that need to be followed:

1. Create an event.
2. Mark animals with an upcoming release dates. This is done in the Patient Info form.
3. Match an animal to an event.



You can view **All** events or all **Upcoming** events by selecting from the **When** list. The highlighted events are those that were marked with highest priority.

The **Patient** list displays the patient's expected release date, id, species and age. The **RWF** column refers to **Release Where Found** and indicates that this patient was requested to be released at the site where found so it may not be available to use in a special event (click here for more information). The **Approved** column indicates whether this patient has been

approved for release yet.

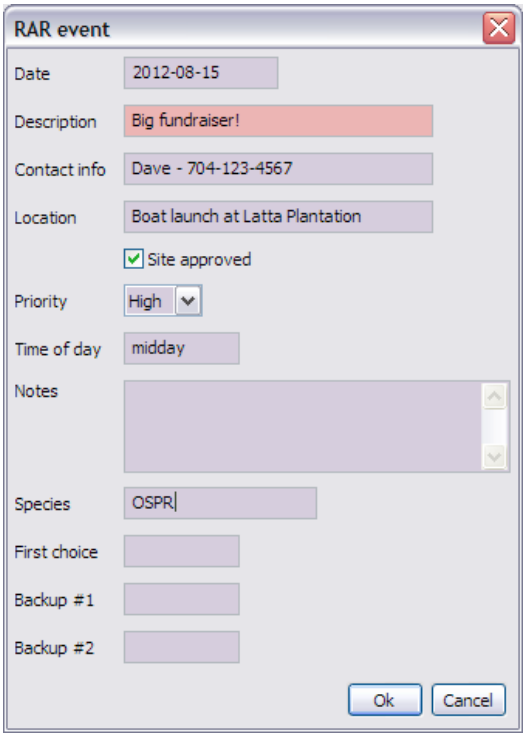
When an animal is associated with an event, the event's description will be displayed in the patient's **Release event** field.

To create a new event, press the **+** button. To delete the selected event, press the **-** button. Double-click an event to edit it.

Note: **RAR** refers to Release-A-Raptor which is catchy name for the release program developed at the Carolina Raptor Center. Its meaning has been expanded to include the release of any type of animal.

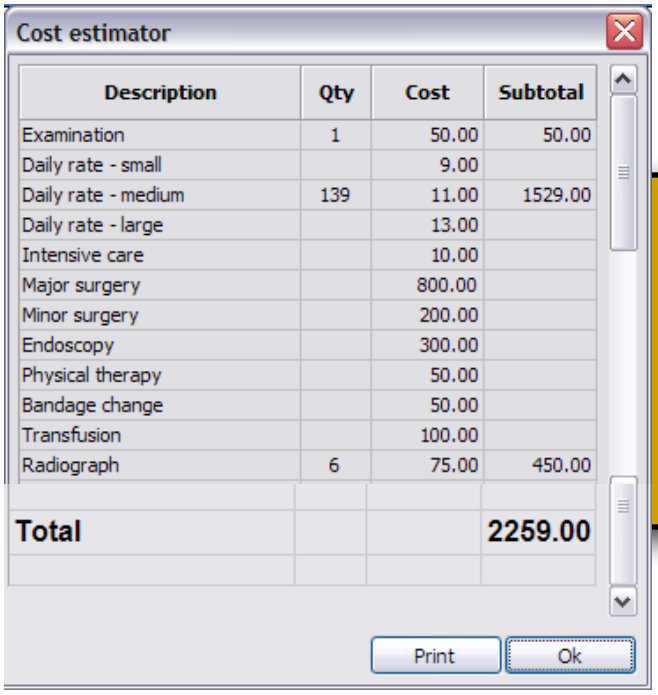
To add or edit an event, a form appears that allows you to enter a **Description** for the event, who is the main contact person and where the event is to take place. The **Date** is optional as some events may be flexible and may be dependent on the availability of a certain species to release. The **Site approved** check box is used to indicate that the specified location has been reviewed and approved. The **Priority** can be set and **High** priority events will be highlighted in the **Event** list. There is an additional **Notes** field and the desired **Species** can also be specified.

The **First choice** and **Backup** fields indicate which animal(s) are matched with this event. You can simply enter the **patient id** of the desired animal(s) in the appropriate fields or, with the **Shift** key pressed, drag and drop a choice from the **Patient** list to the **Event** list. Be sure to drop the choice in either the **Primary** or one of the two **Backup** columns for the desired event in the **Event** list.



Cost Estimator

The **Cost Estimator** function is a tool that provides an estimate of the cost associated with the treatment for a specific patient. It is accessed by pressing the **Cost estimator** link in the **Action Bar** on the animal's chart.



The cost estimator report is very useful to show to the public at release events. It provides a detailed list of everything you did for that animal. and can help in fund raising.

The estimator automatically tallies the number of days in rehab, as well as radiographs, bloodwork and many other tests and procedures. The cost for each day is determined by the species **Cost Category**. See the **Species editor** for more information. A total at the bottom of the spreadsheet.

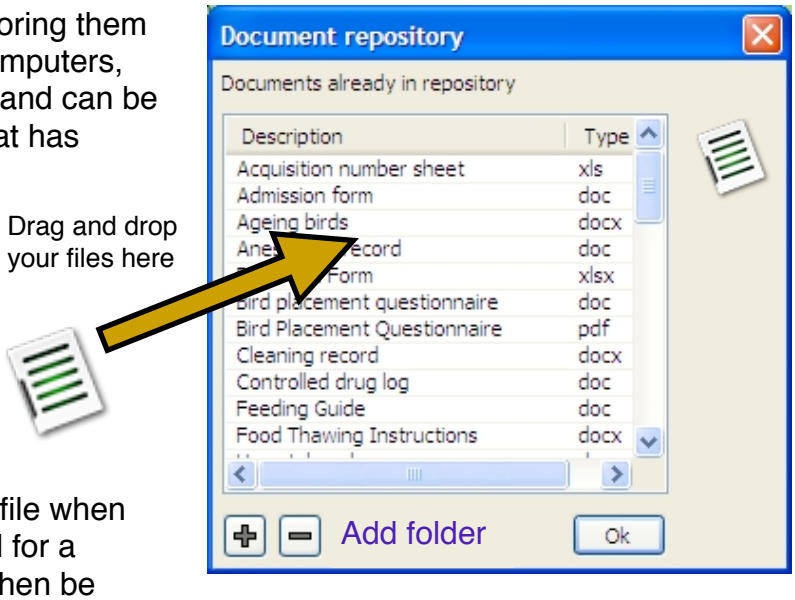
Press the **Print** button to create a report that summarizes the animal's basic information, problems, all treatments and costs.

By default, the Cost Estimator will scan the entire animal's record for lab tests, radiographs, surgeries, etc. However, alternately, in can be configured to base the costs off of entries made in the **Procedures** records. In this case, it will still automatically figure in the Daily rate.

The Document Repository

This function is accessed by selecting **Tools ▶ Document repository** from the main menu. The repository provides an easy-to-access location for various documents and

files of any type. Rather than storing them in various folders on different computers, they are all stored in one place, and can be accessed from any computer that has **RaptorMed** installed. In addition, these files will be automatically copied for safe-keeping when the rest of the database is backed up.



To add a file to the repository, simply drag and drop it onto the form. Or you can press the **+** button and browse to select the file when prompted. You will be prompted for a description of the file and it will then be added to the list. To view or edit a file already in the repository, just double-click on it. To delete a file, select it and press the **-** button.

You can create folders to organize your documents by pressing the **Add folder** link. To enter a folder, double-click on it. To back out of a folder, double-click on the entry that will be listed at the top of the list.

Handler training log

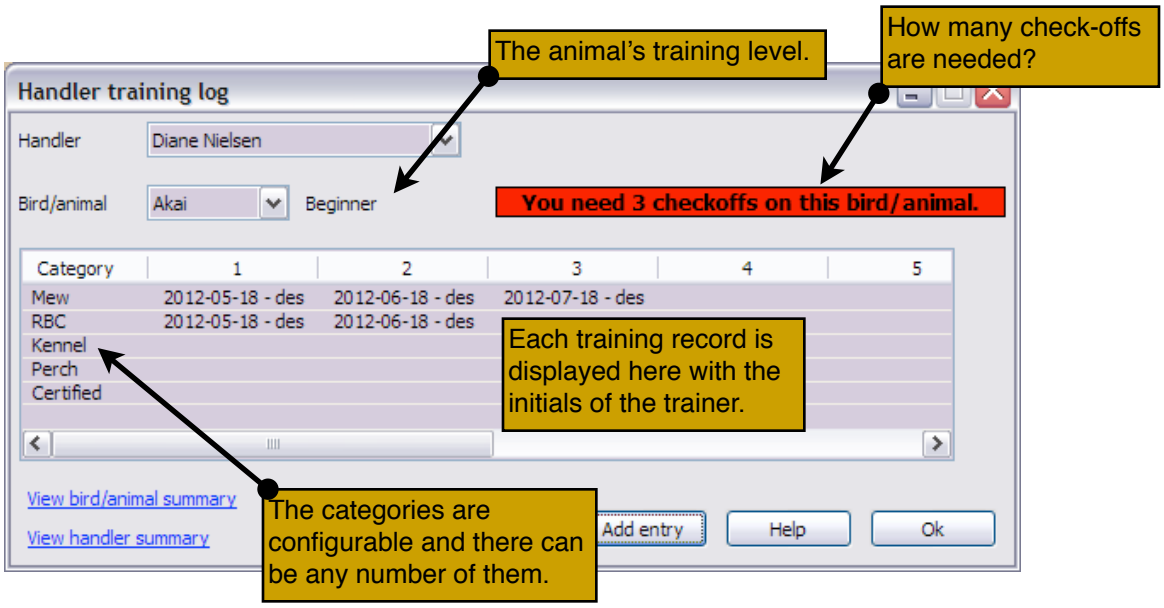
RaptorMed can help you keep track of who is trained to work with various animals in your resident population. To access this function, choose **Edit ▶ Handler training log** from the main menu.

For each resident animal, you can specify a **Training level**. This level indicates how much training a person needs to have in order to be certified or signed off to work independently with the animal. The **Training level** can be one of up to 10 different values. For example: **Beginner**, **Intermediate**, **Advanced**, or **Master**. Click **here** for more information on setting the **Training level**.

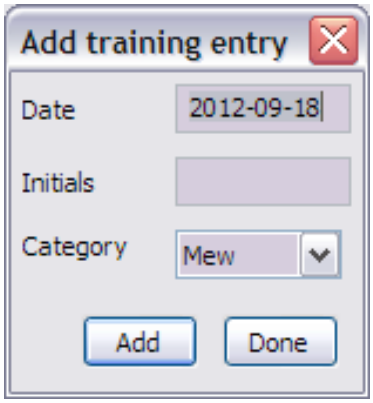
The system can be configured so that a person needs a set number of check-offs in any number of training categories. Once a person has completed the required number of check-offs in each category, you can mark the person as **certified** on a particular animal. Contact customer service for help configuring training levels, training categories and the number of checkoffs needed.

In the Handler training log, you can select the Handler and the animal they are training on. Only people from the **Address Book** with the **Handler** check box checked will be

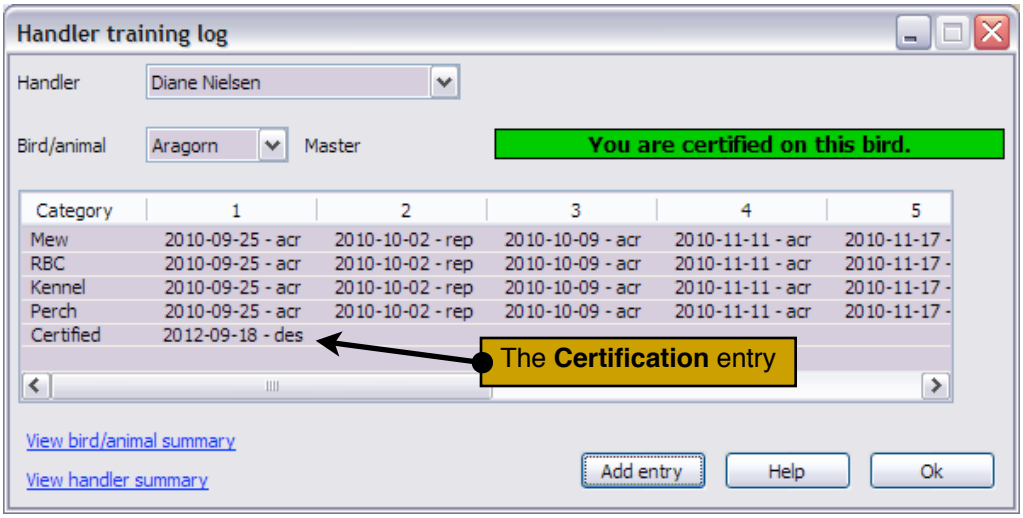
included in the list. Only animals with a **Training level** set will be included the list. Click **here** for more information on the **Training level**.



When an animal is selected, the **Training level** and the number of required check-offs will be displayed. When a person is then selected, each training check-off will be displayed. To add a new training entry for this person/ animal, press the **Add entry** button. A small window will appear that allows you to specify the date, the initials of the trainer and training category. Press **Add** to add a new entry. You can add multiple entries and then press **Done** when you are finished. Entries are added to the main log screen and an entry is also made in the animal's chart.



When all training is complete, add one more entry by choosing **Certified** for the category. The display will change to show a **green** banner indicating that the person is now certified on this animal.



There are two reports that you can run:

- The **Animal summary report** lists all the **Certified** people for each animal.
- The **Handler summary report** lists the training history of each person for each animal.

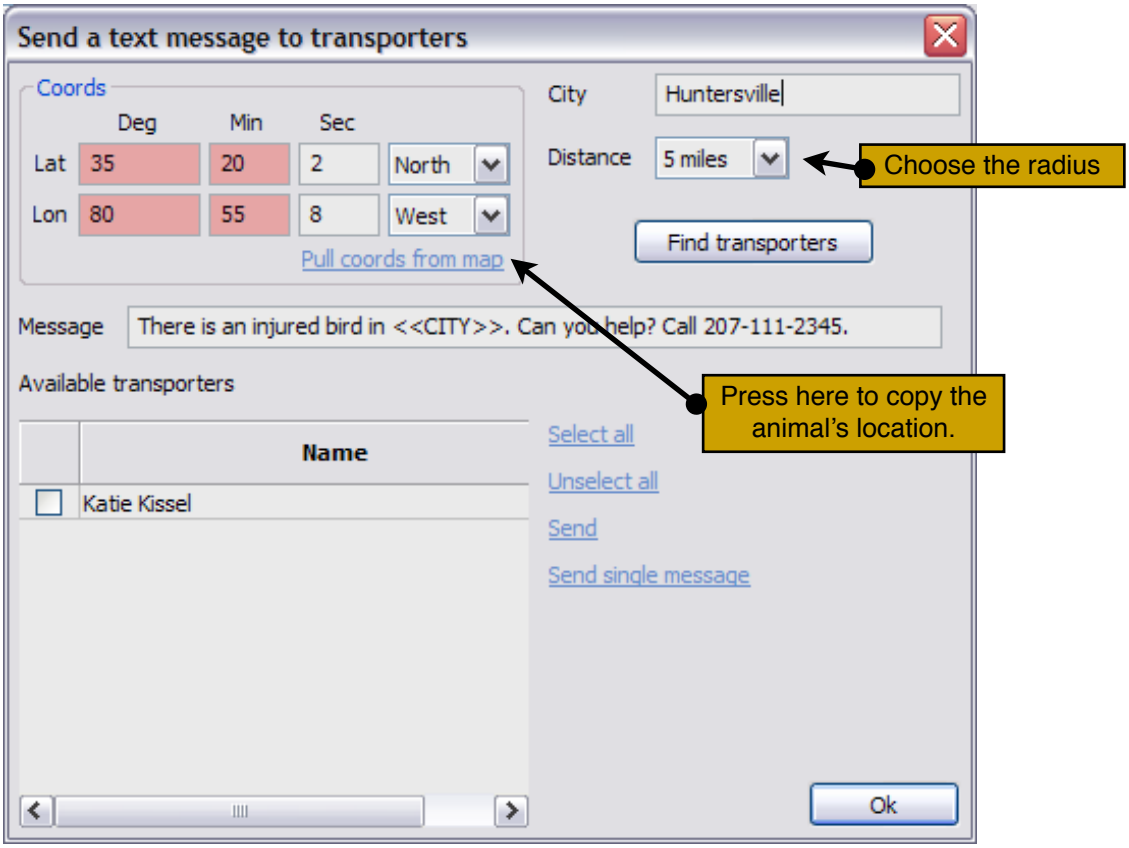
Transporter text messages

This function allows you to quickly send a text message to all **Transporter** people in the **Address Book** which are within a specified radius of an injured animal. To access this function, choose **Tools ▶ Contact transporters** from the main menu.

To use this function:

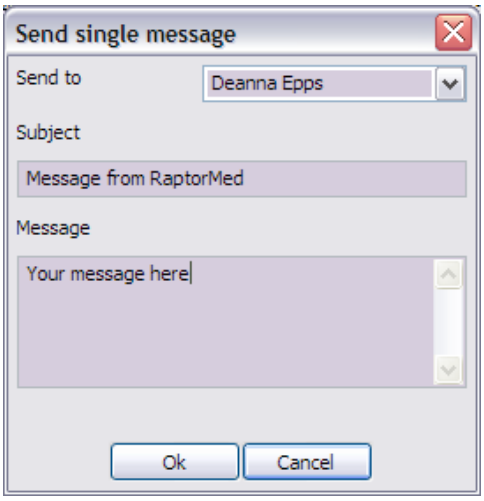
1. Find the location of the injured animal on the **Transporter Google Map**. Click **here** for information on creating the the map. This will store the location of the injured animal in the Windows clipboard.
2. Choose **Tools ▶ Contact transporters** from the main menu. The text message form will appear.
3. Press **Pull coords from map** to copy the location you just stored from the map.
4. You can enter the city's name. This will be inserted into the text message that will be sent.
5. Choose the desired **Distance**. This is the radius in miles that will be used to search for transporters.
6. Press the **Find transporters** button to see how many people are in the desired radius. You can increase or decrease the **Distance** as needed. The list of available people will be printed out for you to view. Note: contacts from the **Address Book** will only be listed here if:
   - They have the **Transporter** checkbox checked.
   - They are within the desired distance/radius.
   - They have a **Mobile phone** number and **Cell provider** specified.

- They have the **Accept text message** check box checked.
- And finally, if the **Availability check boxes** for the time of day and day of week match the current time of day. These check boxes allow you to prevent somebody from receiving a text message at times of day where they cannot accept them or do not want to be bothered.



7. When you have a reasonable list of transporters, select some or all and press **Send**. A text message will be sent to each person. The message is configurable and it is displayed in the **Message** field. You can edit it if necessary before sending. Note that text enclosed in triangle brackets as in **<<CITY>>** in the screenshot above are macros that a automatically replaced with an actual value. In this example, **<<CITY>>** would be replace with "**Huntersville**".

You can also send a random text message to any contact in the **Address Book**. Press the **Send single message** link and the following form will appear. Choose a recipient from the **Send to** list, type in your subject and the message body and press **Ok**. Note that only the contacts with text messaging enabled in the **Address Book** will appear in the **Send to** list.



Inventory manager

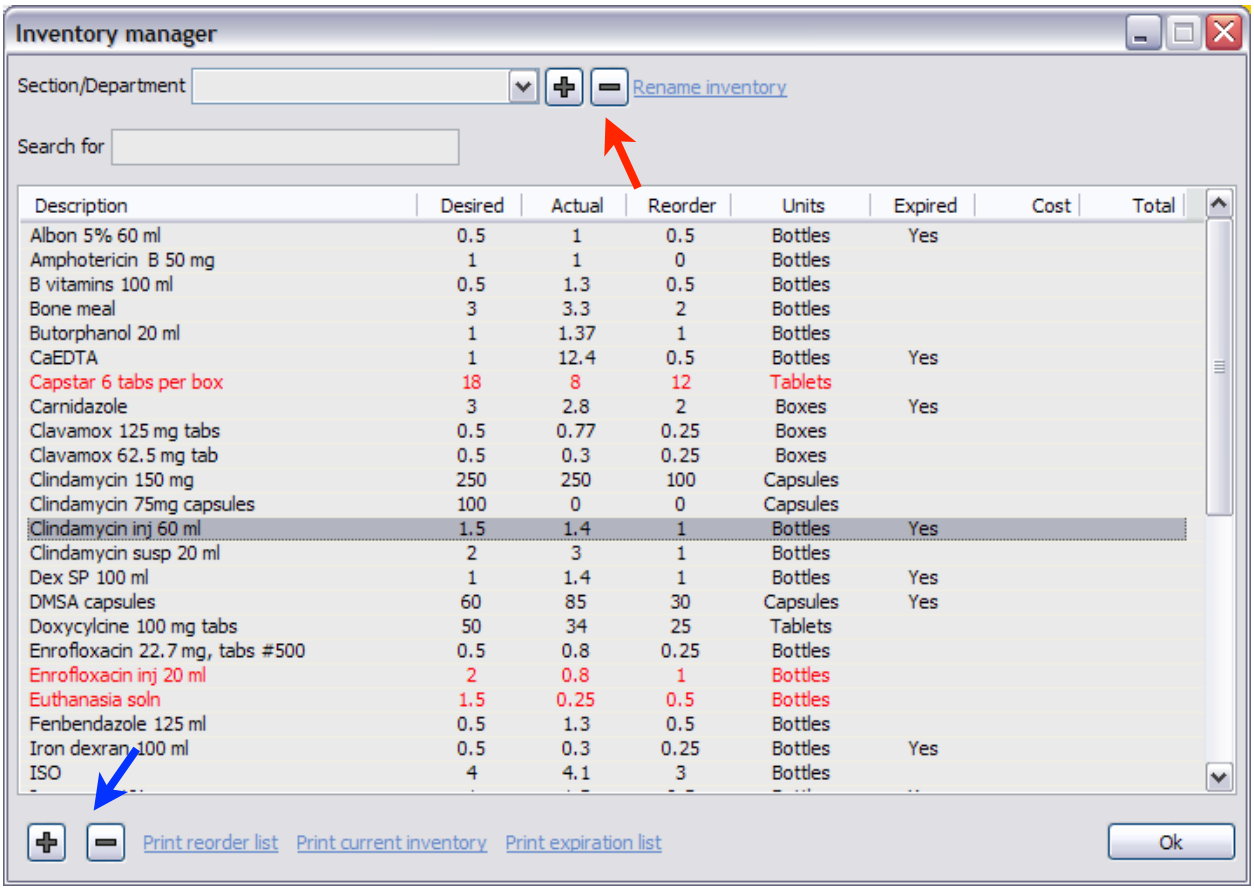
To access this function, choose **Tools ▶ Inventory manager** from the main menu. The Inventory Manager allows you to keep track of supplies and to print a reorder list.

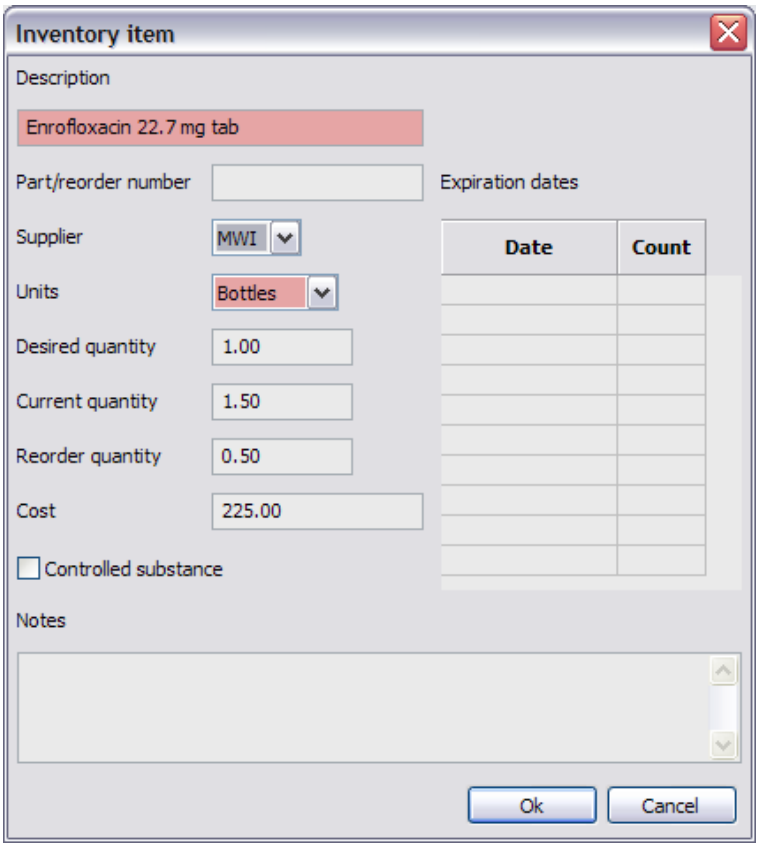
Multiple inventories can be saved separately and this is useful for large organizations with different departments or sections. Using the controls at the top of the screen (**red** arrow), select an inventory to view, add a new inventory or delete/ rename an existing inventory. An inventory does not need to be created and named if you only require a single inventory for the entire organization.

Deleting an inventory will delete all items within it!

Press the **+** and **-** buttons (**blue** arrow) to add and delete specific entries from an inventory. Double-click to edit an existing entry.

The Inventory Manager will indicate if you are below your reorder count by highlighting an entry in **red**. It will also indicate if an item is expired. In addition, the cost per item and the total value of the current inventory for each item is calculated and displayed.


Inventory manager
Section/Department
Rename inventory
Search for
Description
Desired
Actual
Reorder
Units
Expired
Cost
Total
Albon 5% 60 ml 0.5 1 0.5 Bottles Yes
Amphotericin B 50 mg 1 1 0 Bottles
B vitamins 100 ml 0.5 1.3 0.5 Bottles
Bone meal 3 3.3 2 Bottles
Butorphanol 20 ml 1 1.37 1 Bottles
CaEDTA 1 12.4 0.5 Bottles Yes
Capstar 6 tabs per box 18 8 12 Tablets
Carnidazole 3 2.8 2 Boxes Yes
Clavamox 125 mg tabs 0.5 0.77 0.25 Boxes
Clavamox 62.5 mg tab 0.5 0.3 0.25 Boxes
Clindamycin 150 mg 250 250 100 Capsules
Clindamycin 75mg capsules 100 0 0 Capsules
Clindamycin inj 60 ml 1.5 1.4 1 Bottles Yes
Clindamycin susp 20 ml 2 3 1 Bottles
Dex SP 100 ml 1 1.4 1 Bottles Yes
DMSA capsules 60 85 30 Capsules Yes
Doxycylcine 100 mg tabs 50 34 25 Tablets
Enrofloxacin 22.7 mg, tabs #500 0.5 0.8 0.25 Bottles
Enrofloxacin inj 20 ml 2 0.8 1 Bottles
Euthanasia soln 1.5 0.25 0.5 Bottles
Fenbendazole 125 ml 0.5 1.3 0.5 Bottles
Iron dexran 100 ml 0.5 0.3 0.25 Bottles Yes
ISO 4 4.1 3 Bottles
Print reorder list
Print current inventory
Print expiration list
Ok



The Inventory Item editor has fields for the description, supplier and the part number. The choices in the **Supplier** list are all the entries in the Address Book that have the **Supplier** checkbox checked.

For each item, you can specify a desired number, the current number and the number at or below which you would like to re-order each item. You can also specify the **cost** and the units that each item is measure in (i.e tablets, bags, boxes). The **Supplier** and **Part/Reorder number** fields can be filled in and are useful as this information will be printed on the **Reorder list** (see below). Check the **Controlled substance** checkbox for all controlled drugs as this information will feed into various reports and the **Controlled Drug Usage** form.

You can enter expiration dates for each unit/bottle as well as a count for each expiration date. To enter a date, simply type in the edit field or double-click to pull up the calendar. If you leave the count field empty, a **1** will be assumed.

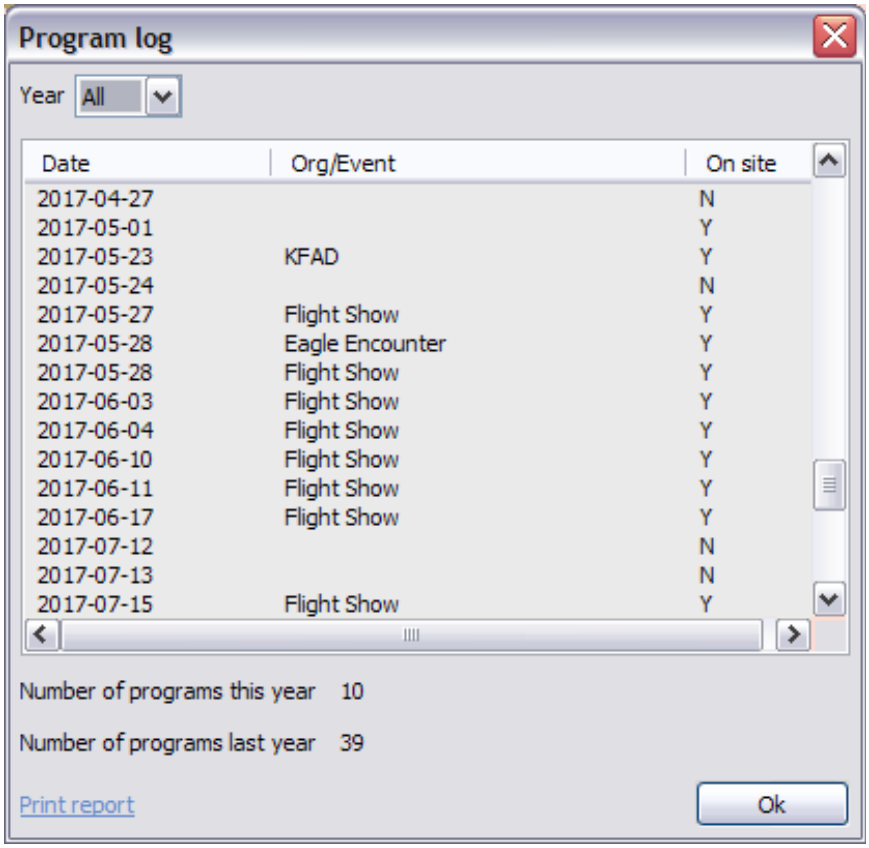
Back on the main **Inventory Manager** screen, press the **Print reorder list** link to produce a list of all items that need to be ordered. This list will contain a entry for all items that have a **Supplier** specified and whose **Current number** is less than or equal to the **Recorder number**. The items are arranged and sorted by **Supplier** and the supplier's phone number as well as each item's reorder number and costs are printed for easy re-ordering.

Print the currently selected inventory using the **Print current inventory** link and you can also see what inventory items will be expiring in the next 3 months by pressing the **Print expiration list** link.

You can also search for items by typing in the **Search for** field. Any matches will be highlighted.

Program log

The **Program Log** is accessible from the animal's main chart window by choosing **Tools ▶ Program Log** from the **Action Bar**. This feature is only available for animals that have a status of **PR**. The log window displays all the programs that this animal was used for, sorted by date. It also displays the number of programs for this year and last year.



You can choose a particular year to view or choose **All** to see all program usage.

To add a new program, you must create a new program record. This can be done by making a **Group Program entry** or by making an individual **program log entry** in the animal's chart. You can edit/view and entry by double-clicking on it and you can print a program usage report by clicking **Print report**.

Each entry can store information about the event and location. If you do programs repeatedly at the same place, you can save the information in the **Address Book** and recall it easily by pressing **Lookup from address book**.

In addition, you can specify a default location if, for example, all your programs are done on-site. Contact Customer Support for more information.

There are fields to record the number of people, the age ranges as well as the type of program.

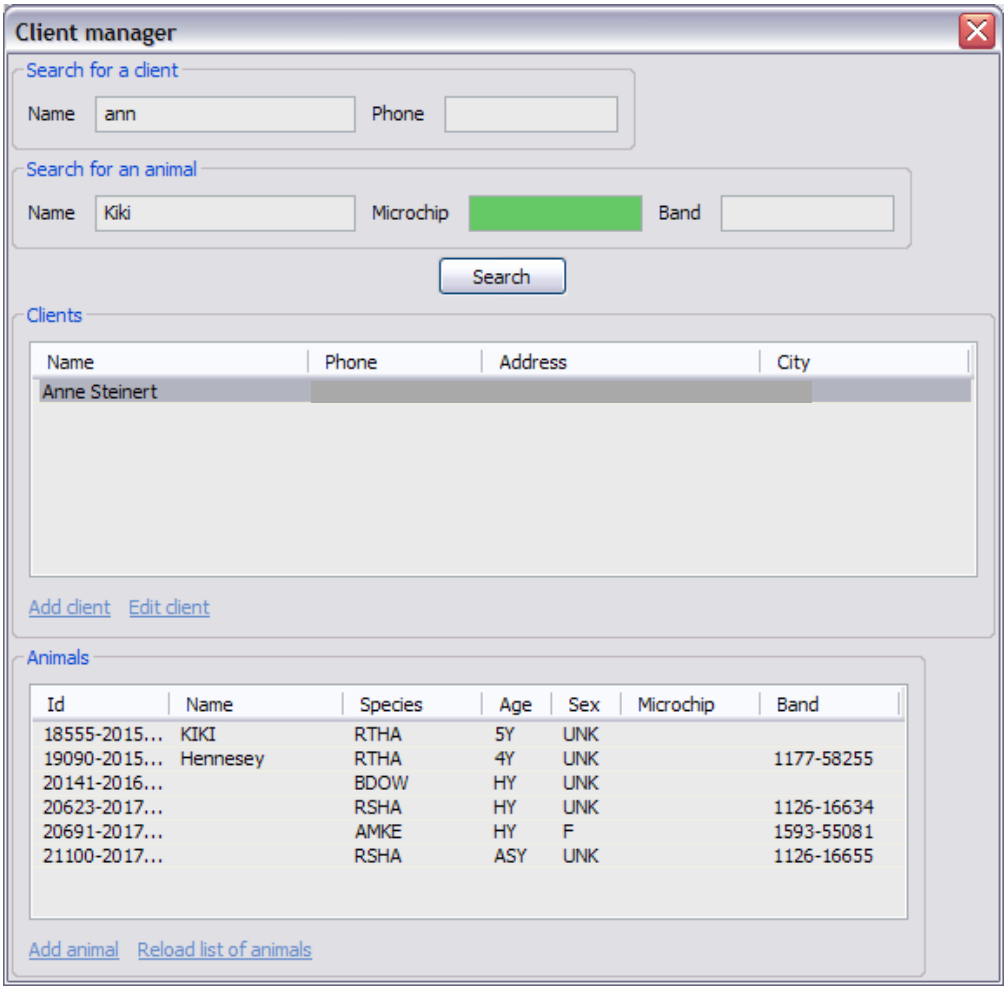
The program usage for all animals can be reported using the Program usage report.

Client manager

The client manager is used for client-owned animals. If enabled, this feature is accessed from the main menu by choose **Tools ▶ Client Manager.** A form will appear that allows you to enter a client's name or phone number or the name, microchip number or a band number of an animal. Partial matches are allowed. Note that a microchip scanner can be used in the green **Microchip** field to automatically fill in this field.

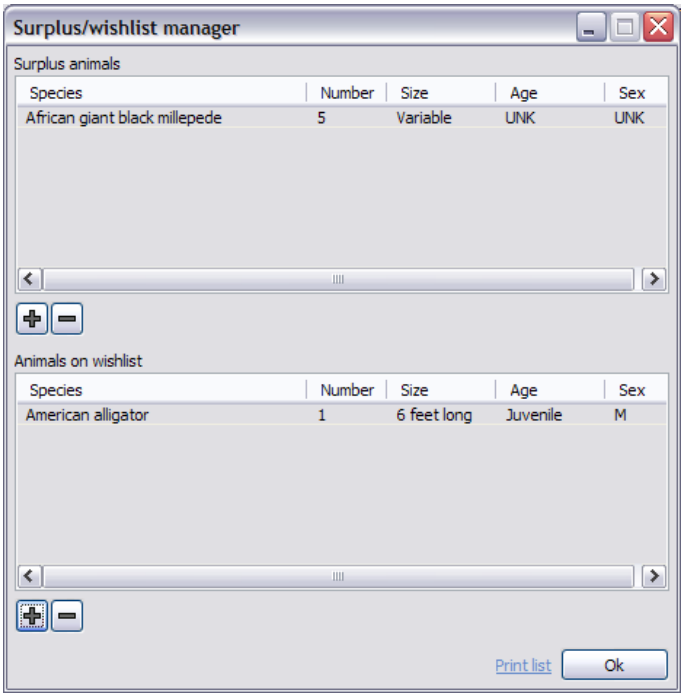
When you press the **Search** button, a list of matching clients will be displayed in a list in the client list. When you select a client, a list of their animal's will be displayed in the animal list. You can double-click on an animal to see it's chart.

There are shortcut links that allow you to add a new client, edit the selected client, and add a new animal for the selected client. Open an animal's chart by double-clicking on it.



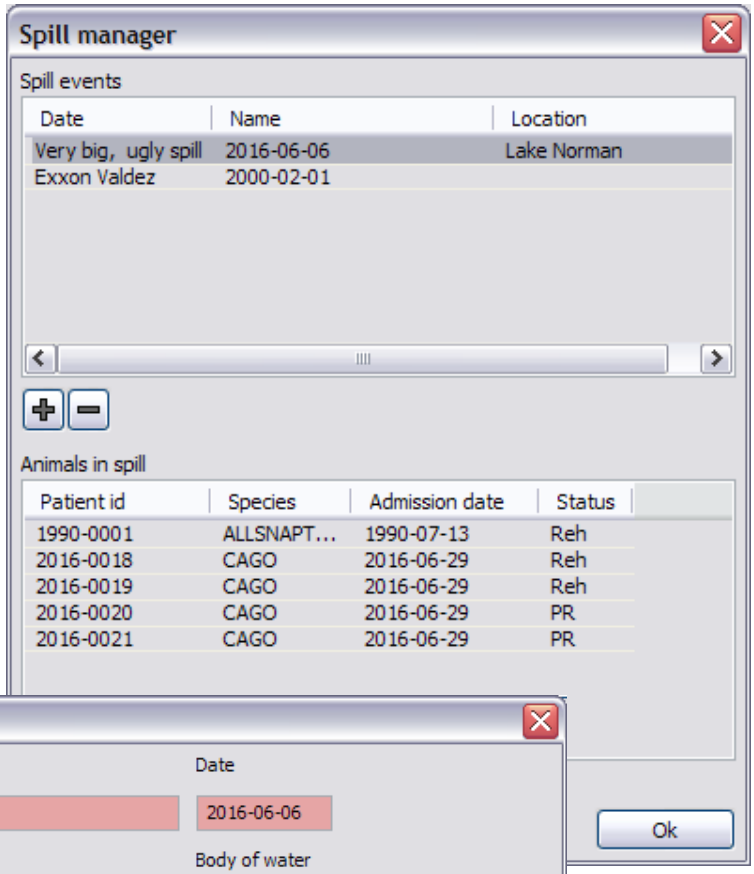
Surplus/wishlist manager

The surplus/wishlist manager allows you to keep track of animals that you want to add to your collection and also animals that you have a surplus of and wish to re-home.
This feature is accessed from the main menu by choose **Tools ▶ Surplus/Wishlist Manager.** The upper list is for surplus an animals and the lower is for your wishlist. Press the **+** and **-** buttons to add and remove entries from each list. Double-click and entry to edit it. You can specify the number, size, age and sex as well as information (name, phone number) for the person to contact.

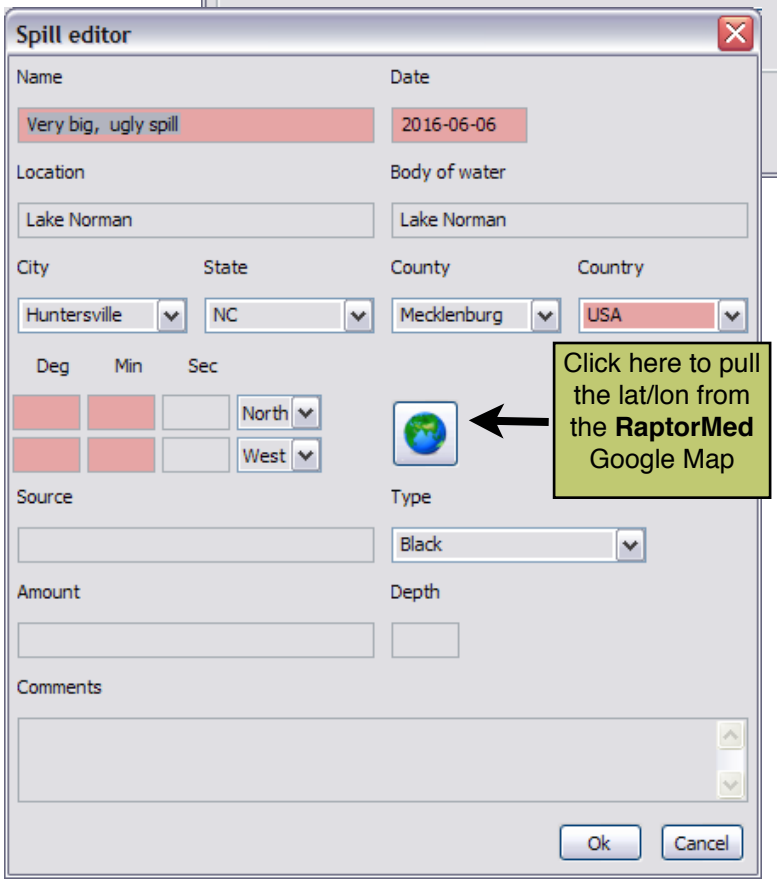


Spill manager

The spill manager allows you to manage oil spill events. This feature is accessed from the main menu by choose **Edit ▶ Spill log.** The upper list shows all the spill events. Press the **+** and **-** buttons to add and remove entries from this list. Double-click and entry to edit it. You can specify when and where the spill event took place as well as information about the type and amount of crude that was involved. The choices for the **Type** of crude can be configured (see Editing list choices).

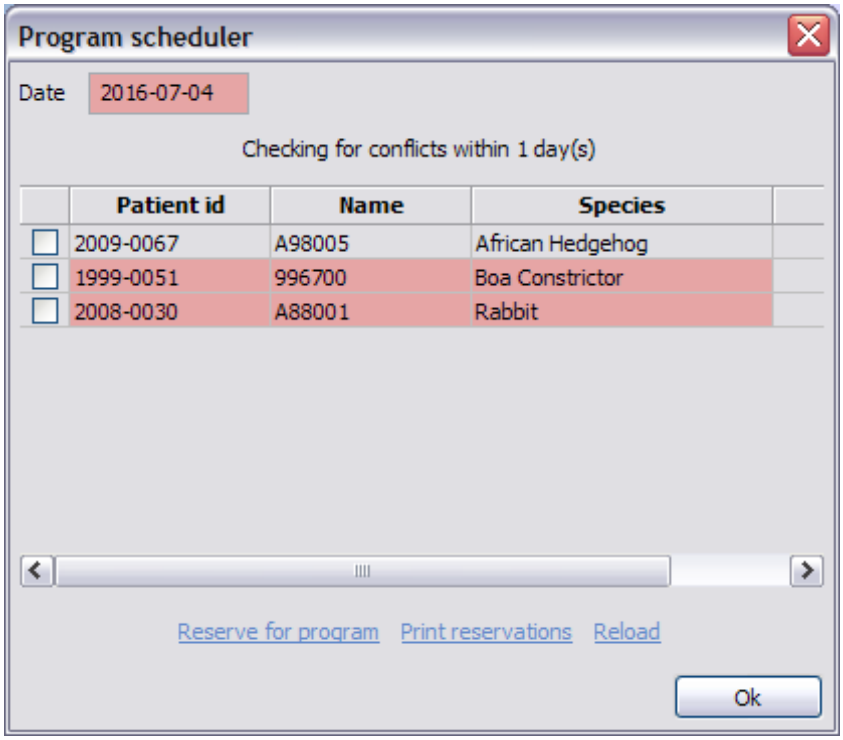


If you single click on a spill entry, all the animals that are associated with the spill will be listed in the lower list. You can double-click on any of the animals to open the corresponding chart.



Program scheduler

The Program Scheduler is used to reserve program animals for programs without worrying about scheduling conflicts. To use the **Program Scheduler**, choose **Tools ▶ Program scheduler** from the main menu. A window will appear that lists all the animals that have been designated to be **Program animals**. That is, they have their **Program animal** checkbox checked.



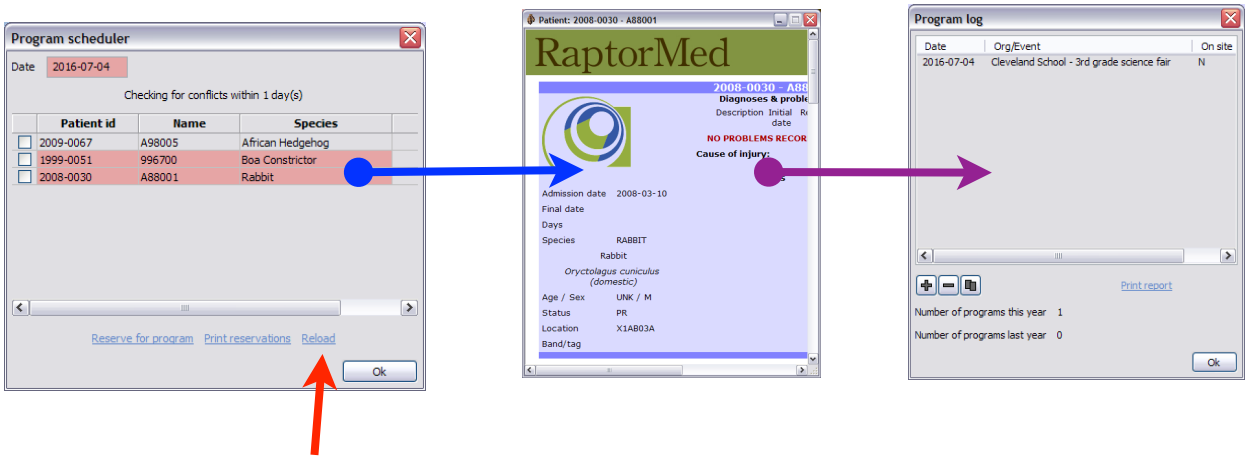
After you specify a date, the this tool will highlight each animal that has a conflict on that date. A conflict is either due to another program already being scheduled on that exact date or if a program is scheduled for within **X** days of the specified date. The actual number of days is configurable and this feature is useful in order to prevent an animal from being scheduled several days in a row without a day off, for example.

The animal list displays the animal's id, name, species and species group. You can sort the list by clicking on the column headings. Choose the animals that are needed for a specific program by checking the appropriate check boxes on the left-most column. Once you have selected the animals that will be needed. press the **Reserve for program** link. The standard **Program Log** form will be displayed.

Note that an animal with a conflict displayed can still be selected and scheduled for a new program. **RaptorMed** only highlights the conflicts. It is up to the user to avoid or resolve them.

At any time, you can double-click on an animal to open its chart (**blue** arrow). This is useful, for example, when resolving a conflict and you want to see what program an animal is already scheduled for. Once you have opened the chart, then click on the **Program Log** link (**purple** arrow) to open the animal's program log. You can then remove or modify an upcoming program in order to resolve any conflicts. If you do modify an animal's programs in this way, you can return to the **Program scheduler**

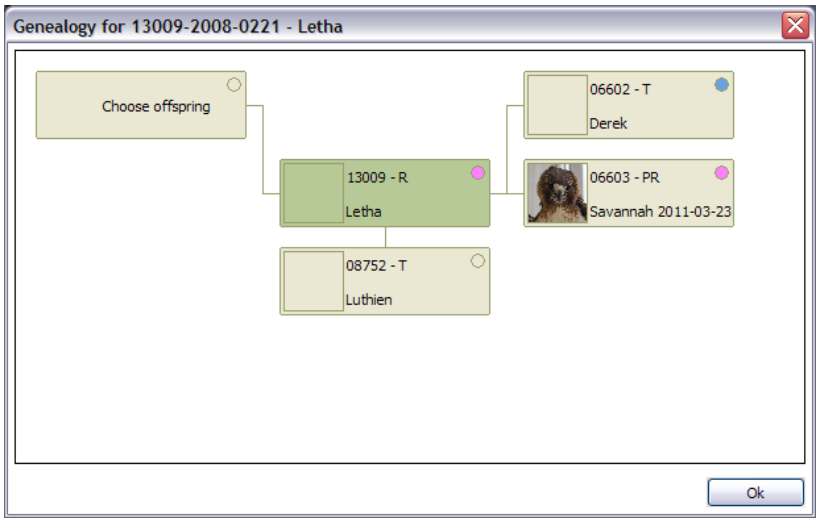
window and press the **Reload** link (**red** arrow) to refresh the display and see that the conflict has been resolved.



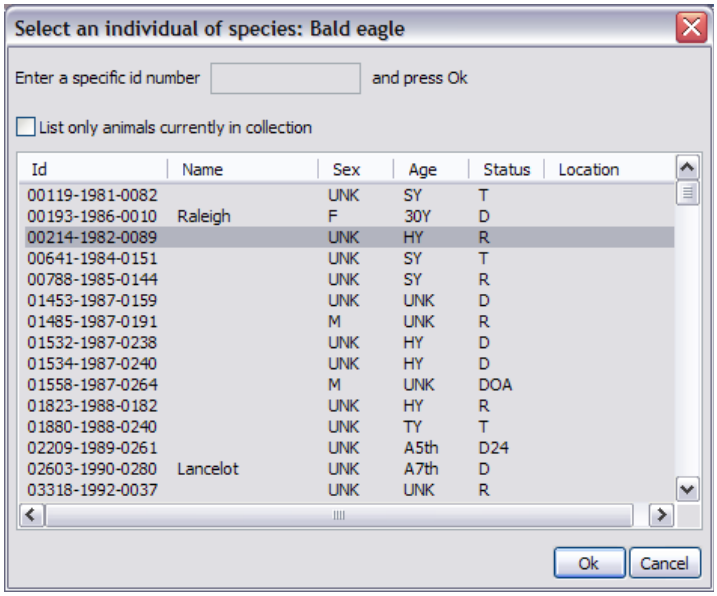
At any time, you can choose a date and print out the reservation sheet for that date by pressing the **Print reservations** link.

Genealogy Tracker

The **Genealogy Tracker** allows family relationships to be tracked and displayed. It is accessed from the **Tools** menu in the animal's chart. When the tracker is opened, it shows the animal of interest highlighted in the center. The parents are to the right, siblings are below and offspring are to the left. The id number, name and sex (indicated by a colored dot) as well as the optional ID photo are displayed. The map can be copied to the clipboard by pressing the **Copy image to clipboard** link.



You can choose a parent or an offspring by double-clicking in an empty cell. A chooser box will appear that allows you to select an animal. You can sort by any column, filter to only include animals currently in the collection, or enter a specific id number.



Double-clicking on a cell that is already set with an animal will center it in the tracker view. If the animal is already centered, then double-clicking will open the animal's chart.

Right-clicking on a father or mother cell that is already set will produce a menu that allows you to clear or reset either the mother or the father.

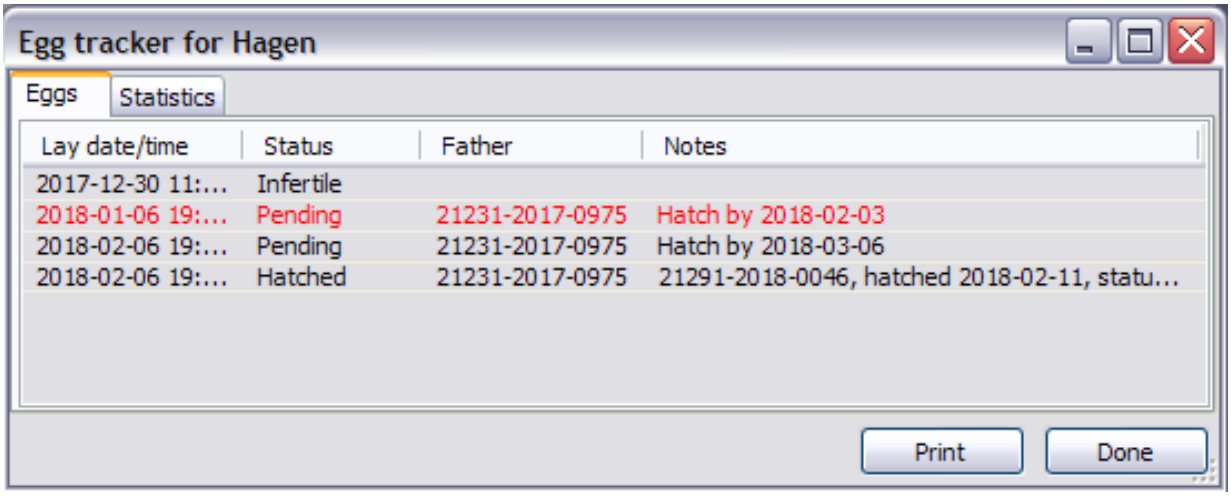
Note: you cannot directly choose siblings as you do parents. Sibling relationships are automatically established when two animals share at least one parent.

Egg Tracker

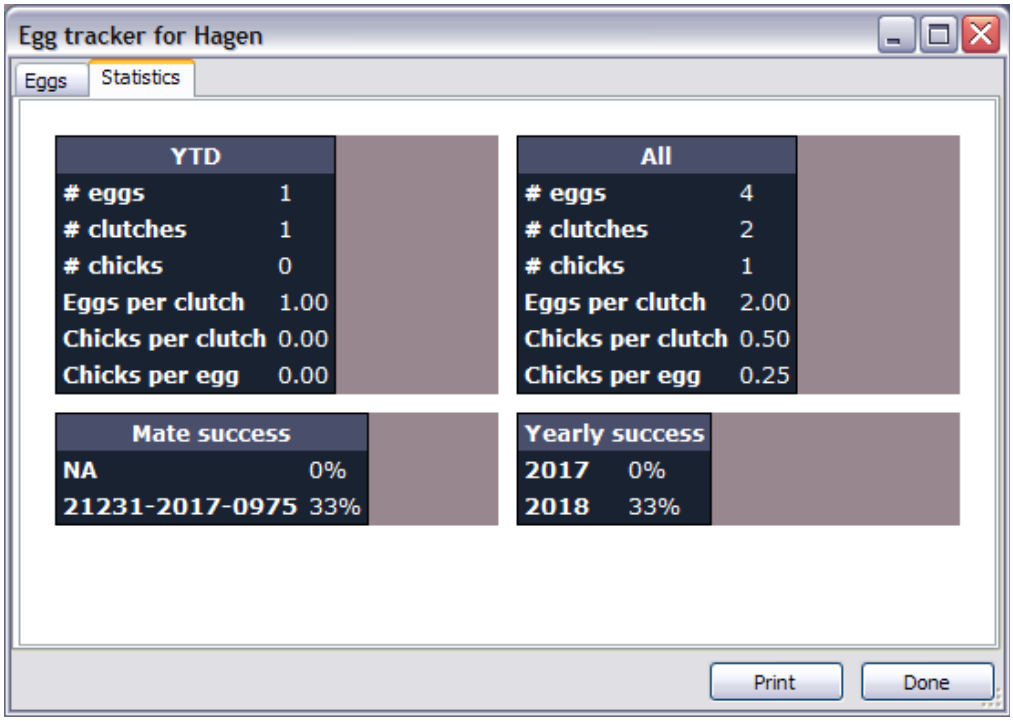
The **Egg Tracker** allows reproduction to tracked and displayed. It is accessed from the **Tools** menu in the animal's chart. This is only available to female animals. The tracker has two tabs. One tab lists each egg along with the following information:

- **Lay date/time**
- **Current status** - the status can either be **Pending**, **Infertile**, **Broken**, **Hatched** or **Other**.
- **Father** - the id/name of the father.
- I**mportant notes** - If the status is **Hatched**, the id and hatch date of the chick is displayed. If the status is **Pending**, then the expected hatch by date is displayed. If the expected hatch date is already passed, then the egg is highlighted in red.

You can double-click on any egg entry to edit it.



The second tab displays reproductive success statistics. There is an area for this year/ YTD, All years as well as a breakdown of success rates per mate and per year.



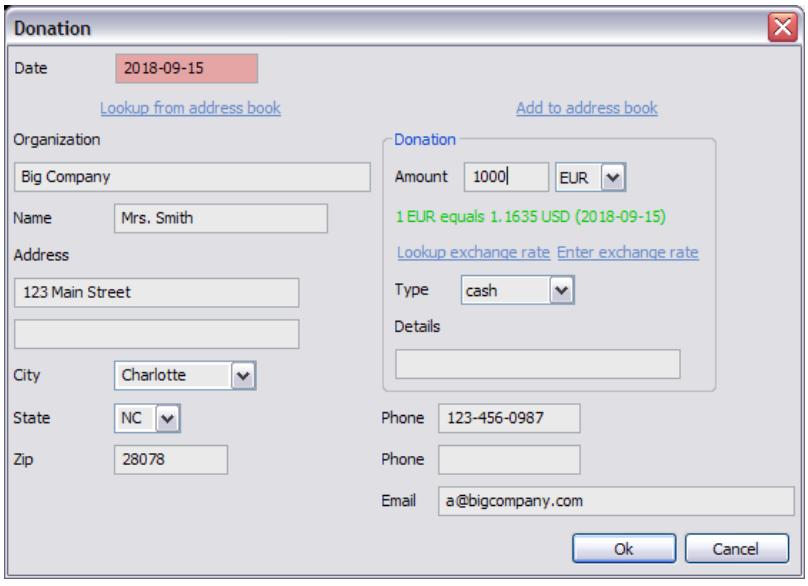
In order to use the **Egg Tracker**, egg records must be created. See the **Eggs** section for a description of how to record eggs.

Donation manager

The **Donation manager** is used when you need to be able to track multiple donations for a single animal. This is useful in zoo situations where there are high-profile animals that may be used in fund-raising campaigns. Note that this feature needs to be enabled to be available. If not enabled, you can still record a *single* donation as described **here**. To record a donation with the **Donation Manager**, choose **Tools ▶ Donations** from the Action Bar in the animal's chart.

The **Donation Manager** list all donations for a specific animal and it displays the total donations for all time. A new donation can be added with the **+** button, the selected one can be deleted with the **-** button and an existing donation can be edited by double-clicking on it.

When adding or editing a donation, you can manually enter the donor information or you can recall and existing donor from the address book by pressing the **Lookup from address book** link. When you do a lookup, only address book entries with the **Donor** type checkbox checked will be displayed in the chooser list. If you are entering a donation for a new donor, you can save this new donor to the address book by pressing the **Add to address book** link.

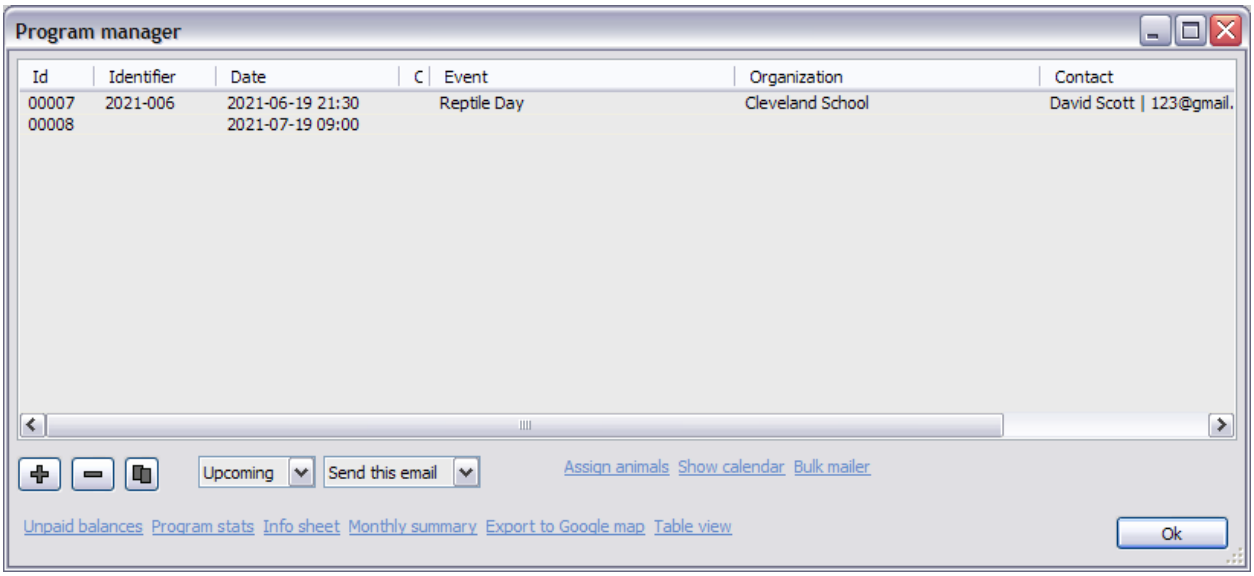


The amount of the donation can be entered as well as the type (cash, check, credit card, in-kind) and additional details such as the check or credit card number. **The data in this field is NOT encrypted so you should not record the *entire* credit card number here.**

Donations in any foreign currency can be accepted by choosing the currency in the currency list. The exchange rate will be displayed. If the system does not have an exchange rate, you will be prompted. In this case, press the **Lookup exchange rate** link to download the latest rate. You can press this link again at any time in the future if you believe the exchange rate is out-of-date. If you are unable to lookup the rate for any currency, press the **Enter exchange rate** link to manually enter a value.

Program manager

The **Program Manager** is used to keep track program usage of live animals as well as specimens. This tool allows you to schedule programs, view them on a calendar and run many useful reports. Choose **Tools ▶ Program manager** from the main menu. The



Program Manager list programs in the database and you can choose to view **All**, just for **today** or **tomorrow**, all **upcoming** and you can choose based on a **year**. Add a new program by pressing the **+** button, delete the selected on by pressing the **-** button and edit the selected one by double-clicking on it. You can also copy the selected one by pressing the **Copy** button. Click **here** for details on actually creating a program. Note that you can also create program records directly in an animal's main file. Using the **Program Manager,** however, just brings many functions all together in one place.

Several reports can be run:

Unpaid balances - this report lists all programs with an unpaid balance. The user is prompted for a date range on which to run the report.

Program stats - this report presents useful statistics on which animals where use on what programs were done. The user is prompted for a date range on which to run the report.

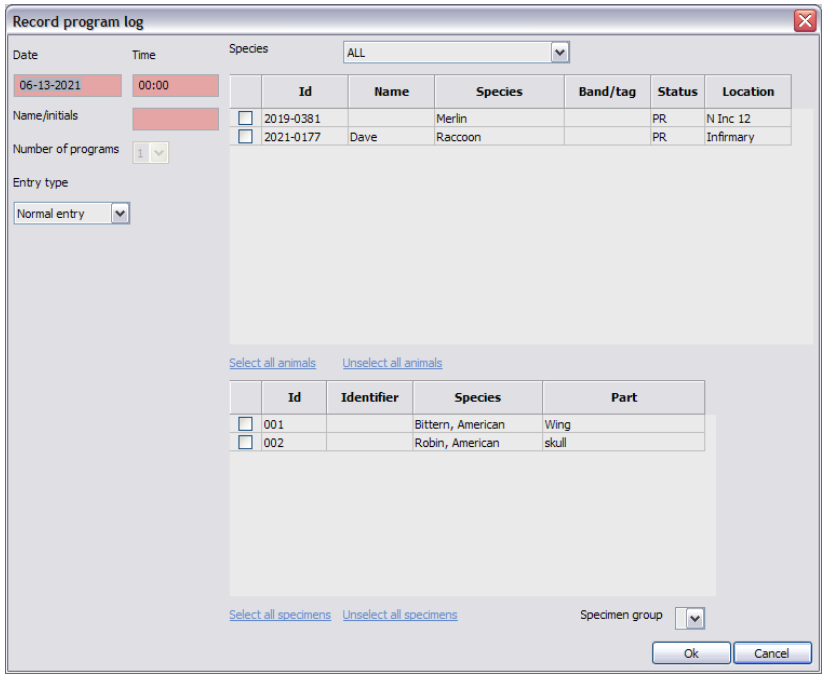
Info sheet - This prints out a handy sheet for the ***selected*** program. The printout list where the program is, what animals to take, how much of a fee to collect, etc.

Monthly summary - This report lists useful stats for a specific month. The user will be prompted to select a year and month.

Export to Google map - The command will plot all programs on a map. The user is prompted for a date range on which to run the report.

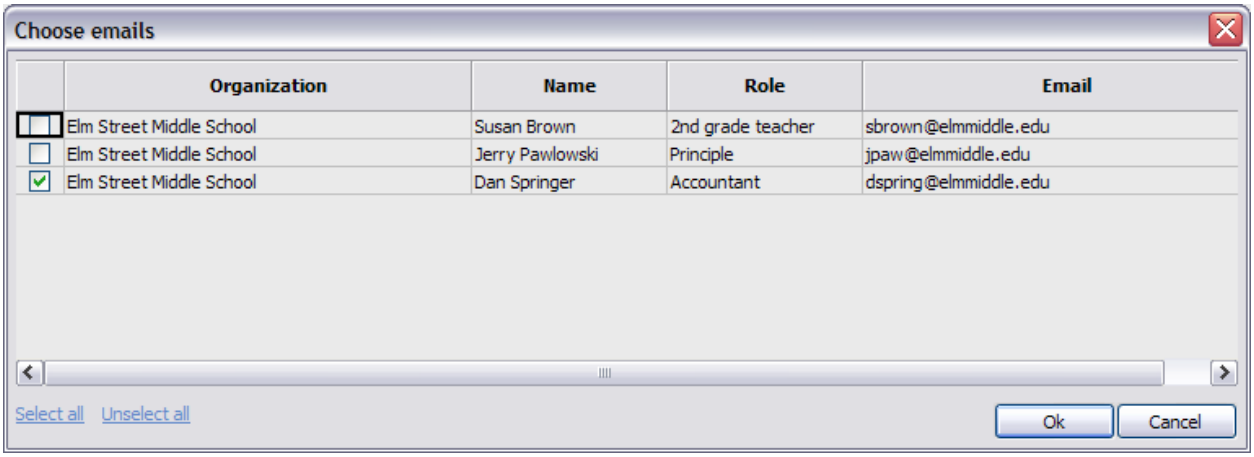
Table view - This report displays all program data for specific year in a simple table view. This is a read-only view. The user cannot edit the data here.

Once a program has been created, select it and press **Assign animals** to specify which animals and specimens are going to be used in the program. A form will appear that allows you to choose which animals and specimens are to be used. The top list displays all resident/ education animals (i.e. status **PR**) that have the **Program animal** checkbox checked. Click **here** for information about the animal info checkboxes. You can filter the list by choosing a species from the list at the top or choose **ALL** to see all program animals. You can also select specimens to include in the program (see **Specimen Tracker** for more information). Press **Ok** when done.



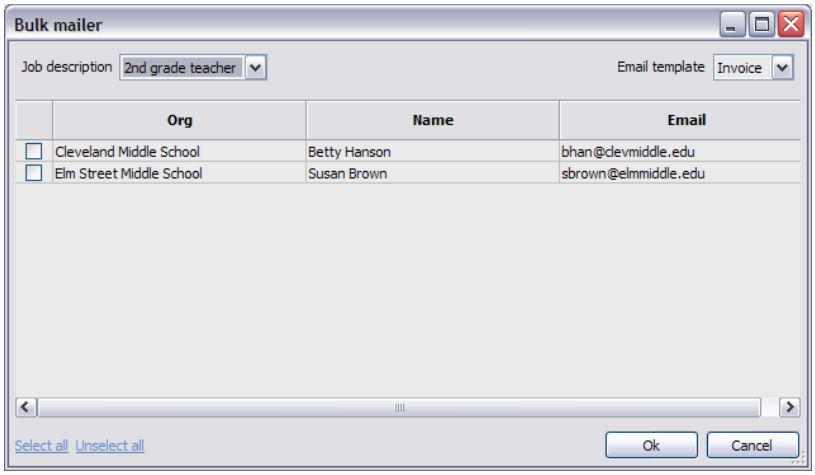
The **Program Manager** allows emails to be sent to the organization listed for selected program. Select the program and then choose the desired email from the list. The list is populated with templates that are created for you. Please contact customer service to create templates for you needs.

Once you selected a program and an email template, you will be presented with a list of all the people in the **Address Book** that are linked to this organization. Note: only address book entries that have an email specified will be included in the list. You can



manually select from the list or press **Select All**. In this example, a program is being done at “Elm Street Middle School” so all the people listed for the school are listed and you can choose who to send the email to. Note that there role/job description is also listed. So you can send an invoice email the accountant and an email about a new STEM program to the 2nd grade teacher. Once you have selected the recipients, press the **Ok** button. The email template will be presented for any needed edits. Press **Send** when done.

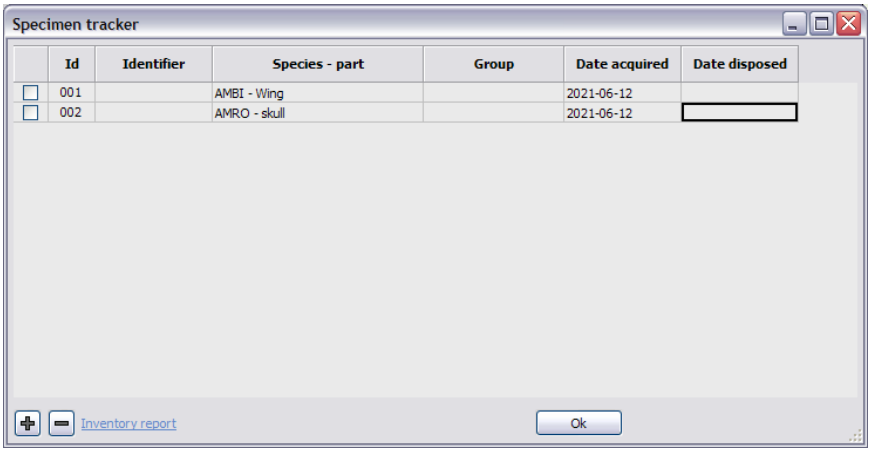
In addition to sending emails to people at a specific organization linked to a specific program, you can, for example, send an email to ***all*** 2nd grade teachers. In the **Program Manager**, choose **Bulk mailer**. A form with **Address Book** contacts will be listed. Use the **Job description** list to filter your contact list. Once you have selected your recipients, choose the desired **Email template** and press **Ok**. As before, you will be prompted to edit the template if needed. Press **Send** when done. Note only **Address Book** entries with a email address AND the **Program client** checkbox checked will be included in this list.



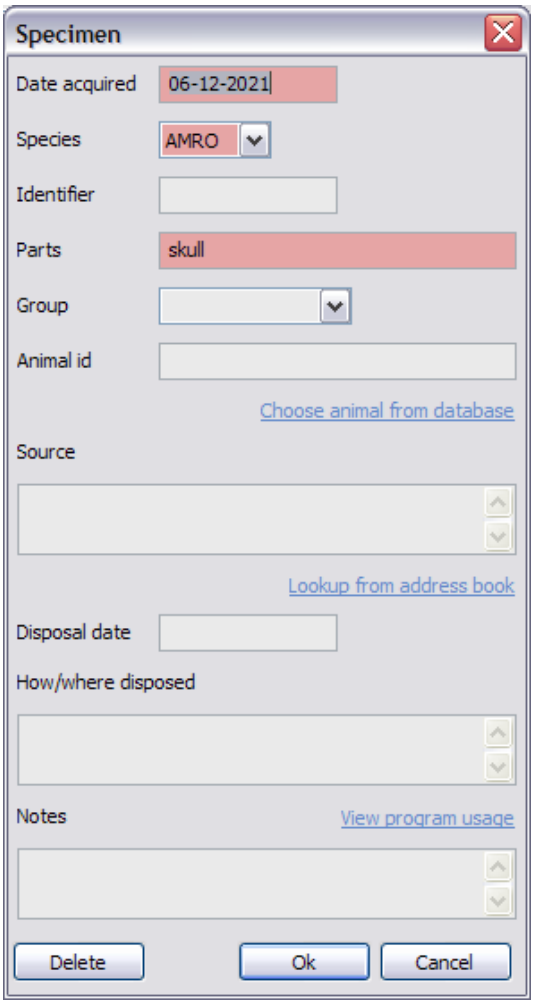
Press **Show calendar** to show programs can also be plotted on a system **Calender**.

Specimen Tracker

The **Specimen tracker** is used to keep track of biologic specimens such as skulls, wings, feet, etc. that are commonly used in educational programming. Choose **Tools** ▶ **Specimen tracker** from the main menu. A list displaying your collection will appear. A new specimen can be added with the **+** button, the selected (check the box in the first column) ones can be deleted with the **-** button and an existing specimen can be edited by double-clicking on it. Generate a report of the current collection by pressing the **Inventory report** link.



When adding a new specimen, you must enter a acquisition date, choose a species and provide a description of the specimen such as “skull” or “wing”. You can also provide a unique **Identifier** and/or choose a **Group** if they would help you organize your collection. The choices for the specimen groups can be specified using the **Edit list choices** function.



The animal of origin can also be recorded either by entering a name or id number or you can press **Choose animal from database** to choose from a list. A form listing only animals of the specified species will be presented. By default, only animals **NOT** currently in the collection will be included but you can press **List only animals currently in collection** to see current animals.

The **Source** field can be used for specimens from another/external source and you can press **Lookup from address book** to choose a supplier already in the **Address Book**.

The **Disposal date** and details should also be recorded. Although not mandatory, this information may be required on various reports.

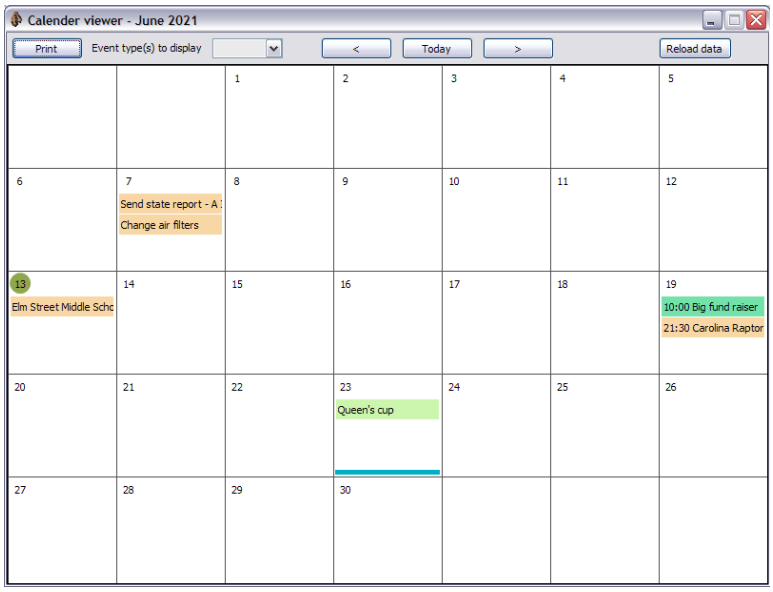
Press **View program usage** to see a usage report. Actual program usage is recorded either in the **Program Manager** or by using the **Group Program** function.

Calendar

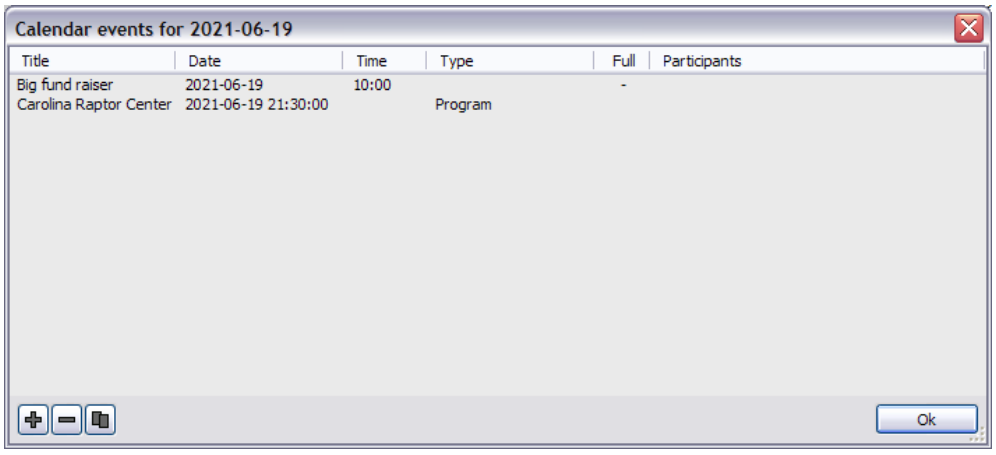
Choose **Reports ▶ View calendar** from the main menu to view the system calendar. The **Calendar** can be used to view **Reminders**, scheduled **programs**, **release events** and generic **calendar events**. You can choose what type to display by choosing from the **Event type(s) to display** list at the top. In **Preferences**, you can specify which type of events to display by default.
An entire month is viewed at once and you can go forward or

Note: only reminders with a specific date can be viewed on the calendar.

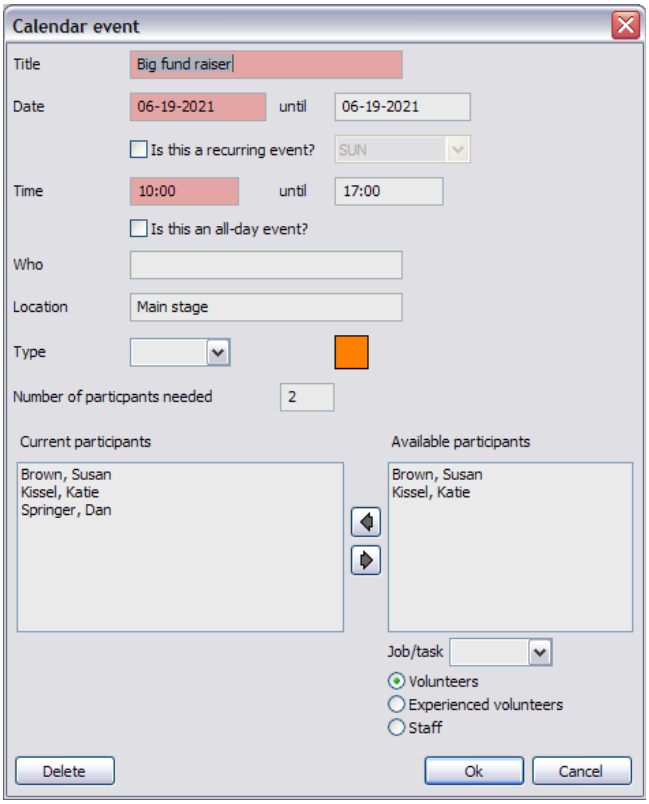
back by pressing the **>** and **<** buttons. Press the **Reload data** button to get an up-to-date view. This may be necessary if other users are adding or otherwise modifying events.



You can double-click on an existing item to edit it. Double-click on a blank area in any day to view a list of all items for that day. In the list form that appears, you can edit an existing item (reminder, program, release event or calendar event) or add a new calendar event. Press the **+** button to add a new calendar event, press the **-** button the delete the selected calendar event. Note that you cannot currently delete a reminder or program from here.



Calendar events can have a start and end time, they can be for a single day or they can repeat. In addition, people can be assigned to events so this can be used as a full-featured scheduling tool.



To create a calendar event, provide a **Title** and a **time** of day. For multi-day events, provide an **Until** date. For a recurring event, check the **Recurring** checkbox and choose a day of the week or Everyday.

You can choose a **stop** time or check the **All-day event** checkbox. There are also fields to indicate the contact person info and where the event is taking place.

Finally, you can specify a **Type** for the event. For example, “fund raiser” or “team building”, etc. These types can be configure in **Edit List Choices** (choose **Calendar event type**). You can also specify a color for use when displaying the event in the calendar. Click on the colored box to select the color. To specify that all events of a certain type are all the same color, you can enter event types in the **Edit List Choices** tool as in `“Fund raiser: 200 0 0”` where “Fundraiser” is the event type and the numbers are the red, green and blue color palette.

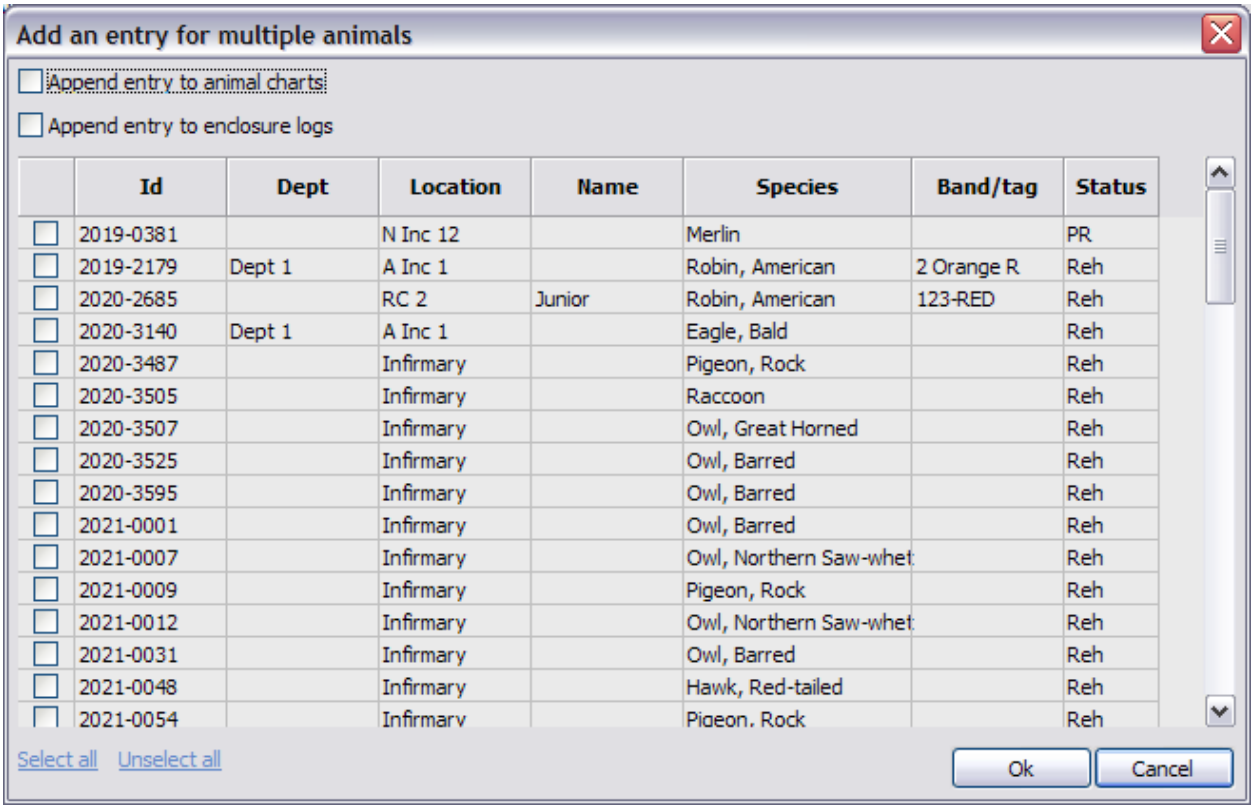
Finally, you can specify how many people are needed, if any, and actually select participants from the **Available participant** list. To add somebody to the **Current participants** list, simply double-click on the person in the **Available** list. Or select the person and press the **<** arrow. To remove somebody from the current, double-click on them or select them and press the **>** arrow. You can filter which people are in the **Available** list by selecting **Volunteers** or **Staff** and only those types of entries from the **Address Book** will be displayed. You can also choose from a list that only contains volunteers with previous experience in a specific job category. To do this, select the **Experienced volunteers** button and make a choice in the **Job/task** list. Note: the volunteer labor categories are configured using **Edit List Choices** (choose **Volunteer labor category**).

Note that a calendar event that does NOT have enough people assigned to it will be displayed in the **Calendar** with an **X** before the time of day.

Miscellaneous functions

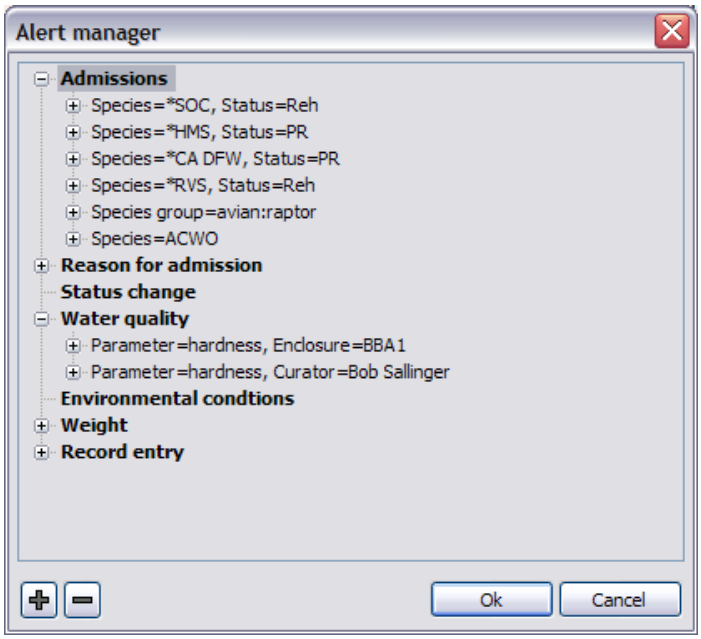
Selecting a mate
Choose **Tools ▶ Choose mate** from the **Action Bar** in the animal's chart. The **Individual Selector** box will appear. Refer to the **Genealogy Tracker** for more details on using the Individual Selector. Once the mate choice is saved, it will be used to automatically fill the **`Father`** field when an **Egg record** is created. Not that this choice can always be overridden.

Add entry to all charts
Choose **Tools ▶ Add entry to all charts** from the main menu. A form will appear that lists all animals that are of status **Reh** or **PR**. Select individual animals by checking the box in the first column or you can press the **Select all** link. Choose whether to append the new entry to either the animal's record and/or the enclosure logs. The press **Ok** and the standard **Group entry** form will be presented.



Custom automated alerts

The system allows user-defined alerts to be programmed into the system. Alerts can be triggered for the following types of events:



- Admissions - alerts can be setup up to trigger when specific species are admitted or if admissions occur for various reasons (such as a gunshot or leg-hold trap).
- Changes in disposition or status
- Water quality values out of range
- Environmental condition values out of range
- Weight out of range
- When an record entry of a specific type was made. For example, you can setup an alert every time an **Important Event** was recorded or you can be alerted whenever a CBC record is entered.
- When an animal's treatment/feeding plan has been changed.

In addition to setting up an alert, you can configure what will happen when each alert event occurs. The following actions can be taken:

- Popup a message on screen when the event happens.
- Create a reminder that other users can subscribe to
- Send an email
- Send a text message

To setup alerts, select **Tools ▶ Maintenance ▶ Alerts editor** from the main menu. A form will display each of the major alert categories in a tree structure. Each alert is listed under each category and each action is listed under alert.

To create a new alert, select the category of interest (such as **Status change**) and press the **+** button. To delete an alert, select it and press the **-** button. To edit an alert, double-click on it.

The forms to edit or create an alert are different for each type of alert but they all have some basic similarities. Each for has an **Enable** check box to enable or disable the alert. In addition, each alert can be configured to be triggered based on various criteria. Each criteria can be left blank but at least one must be selected. If more then one criteria are specified, then the alert will only be triggered if **ALL** specified conditions are met.

The message template can contain macros in square brackets. These macros will auto-expand to the actual data corresponding the specific alert. The following macros can be used:

`[STATUS]`
`[NAME]`
`[ANIMAL_ID]`
`[SPECIES]`
`[STATE_FEDERAL]`
`[REASON_FOR_ADMISSION]`
`[ENCLOSURE]`
`[PARAMETER]` - For water quality and environmental conditions. This indicates the name of the parameter.
`[VALUE]` - For water quality, environmental conditions and weights.
`[ENTRY_TYPE]` - For record entry alerts. This indicates the description of the entry type.
`[TODAY]` - Prints today's date.

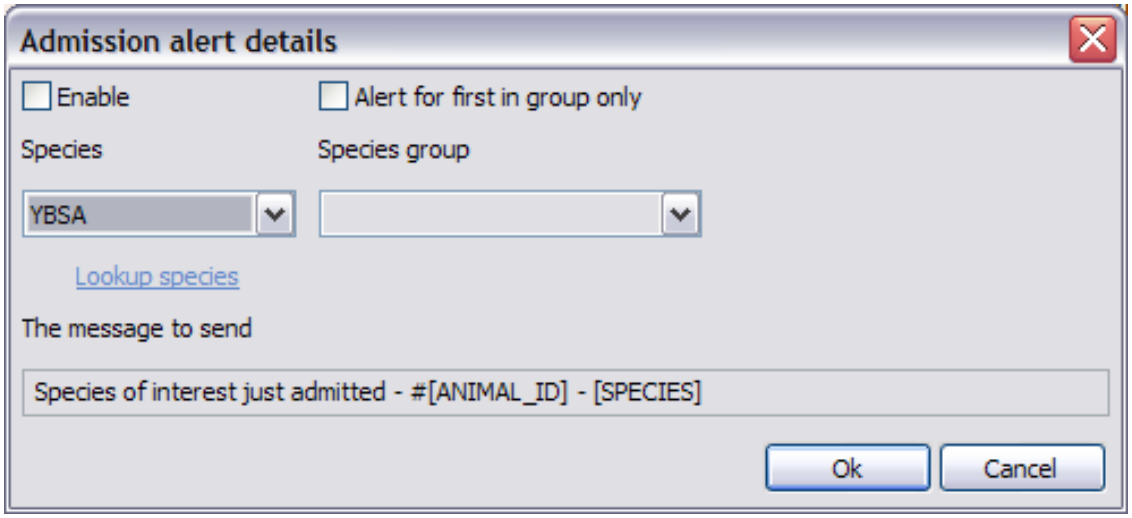
Most forms have a **Species** and **Species group** list to select which species are involved and all have a **Message to send** field which provides a template for the actual text in the message that will be sent in the alert. The message text can contain one or more of the macros listed in the green box. Each macro is enclosed in square brackets and it will be automatically replaced with the corresponding data. For example:

```
Record entry of type '[ENTRY_TYPE]' made for [NAME]/#[ANIMAL_ID]
```

has three macros that would be replaced with the type of record entry just created, as well as the name and id of the animal.

The species lists contain a few special values:

- `*SOC` - all species marked as a species of concern (either state or federal)
- `*HMS` - all species marked as a highly migratory species
- `*RVS` - all rabies vector species
- `*CA_DFW` - all species marked as of interest to the California Department of Fish and Wildlife.



The **Reason for Admission** list has a special value (`*ILLEGAL`) that is used to for all reasons of admission that are defined as illegal.

The admissions alert forms also have a checkbox for **Alert for first in group only**. This checkbox generally should be checked. Otherwise, an alert will be generated for each animal if a group of animals is added with the **Group Add** command.

The water quality, environmental conditions and weight alerts allow you to specify an **Enclosure**, a **Curator** or a **Department**. For example, a curator can create a single alert to for any out or range pH or temperature values in all his or her enclosures.

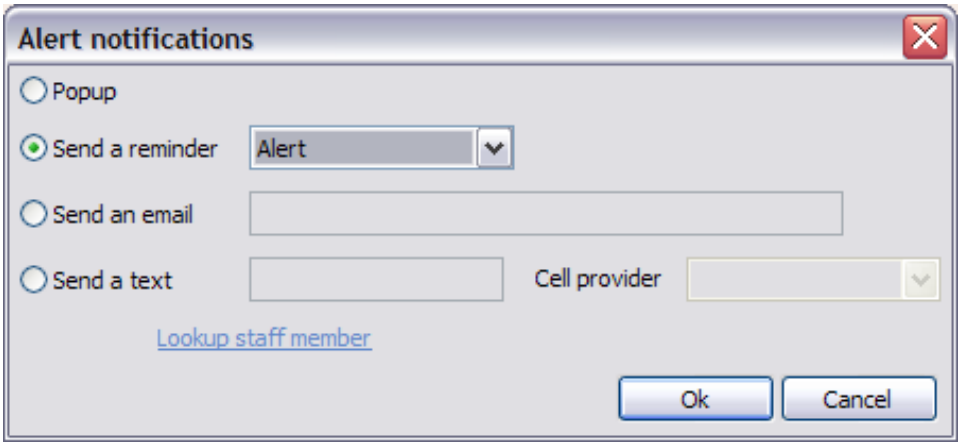
The weight alerts allow you specify an **Animal id** or a **Status** so alerts can be programmed in for all resident animals at once or for a single animal.

Alerts for record entries can be defined for a specific **Animal id**, **Species** or **Species group** and you can choose which **Type** of the main entry such as “Vet entry” or “Important event”. You can also specify record types such as “CBC” or “Surgery”, etc. are of interest.

Alerts for treatment plan changes cab be defined for a specific **Animal id**, **Status**, **Enclosure**, **Curator** or **Department**. In addition, alerts can be generated based on **Who** made the treatment plan change.

Once you create an alert, select it and press the **+** button to add an action. An action can be just a simple popup message on screen, it can send a system-wide reminder that other users can subscribe to or it can send an email or text message. Any number

of actions can be added for each alert. Note: when sending a reminder, you must choose a reminder category.



Chapter 6

Miscellaneous functions
- Finalizing a patient
- Delete last group entry
- Exporting releases to a Google map
- Bandit integration
- Locking a record
- Using abbreviations
- Group animals
- Importing a medical record
- Recalculating doses for all animals
- View local weather

Configuring the system
- Preferences
- Remote access
- List choices and locations/enclosures

Users

System maintenance
- Increment ages
- Backing up the database
- Settings editor
- Text template editor
- Species editor
- Treatment options editor
- Medication editor

Enclosure editor
- Enclosure medication editor
- Licensing and system information

Miscellaneous functions

Finalizing a patient
Once an animal's final disposition has been established, it's status must be updated in the system. An animal's **status** is set by clicking **Patient info** in the **Action Bar** on the patient's chart. Click here for more information on setting **Patient info**. The choices for patient status are summarized in this table.

Status	Description
DOA	dead on arrival
EOA	euthanized on arrival
D24	died within 24 hours
E24	euthanized within 24 hours
D	died after 24 hours
E	euthanized after 24 hours
Reh	currently in rehab
R	released
PR	currently a permanent resident
T	transferred
ESC	escaped
COA	client-owned animal

Only **Reh** and **PR** are considered "**active**" patient statuses. All others are inactive and it is important to properly set the patient **Status** and **Final date** in order to remove a patient from active status.

Note that if you set the patient status to **R** or **T**, then you should also create a **Release** or **Transfer** record for the patient.

- Click here for **Release** records
- Click here for **Transfer** records

Client-owned animals (COA) are a special case. These animals are not considered an "**active**" patient unless the **Active patient** check box is checked. If this box is not checked, these animals are assumed to be away, offsite with their owners and will not appear on any daily treatment sheets. In addition, the status of COA animal should never be changed. Once COA, they are always COA. Instead, when there is a status change, you should use the **Sub status** field. The **Sub status** field allows you to select from one of the following choices: Died, Euthanized, Escaped, Transferred, or Released. Note that the **Final date** should also be set when setting the **Sub status**.

Delete last group entry
This command allows you automatically delete the last record entry for each patient in the specified location. This is primarily used to correct a previous data entry error and is accessed by right-clicking on the enclosure and choosing **Delete last group entry**.

Bandit integration
All federal bands that are placed on avian animals in the United States prior to release must be reported to the Bird Banding Lab (BBL). This is typically done through the use of the Bandit software. You can manually enter the data into Bandit but this is cumbersome, time-consuming and error prone. **RaptorMed** simplifies this process. Choose **Report ▶ Yearly and monthly reports ▶ Bandit** from the main menu. You will be prompted to enter a date range. You will then be prompted to select a species. Select a single species and press **Ok** or **Cancel** if you want to export data for all species. You will then prompted to select a folder to save to and **RaptorMed** will create a file that contains the required information on all the bands used in the specified date range. You can then use the **Import** command in Bandit to load this data and submit it to the BBL.

To import this data into Bandit version 3.01 or 4.0:
- Choose File ▶ **Import from file ▶ Bands/Recaptures** from the main menu**.**
- Choose **tab-separated file** for the type of file.
- Check the **Skip first row/Don't import first row** checkbox.
- Choose **Matching names** for **Arrange by**.
- Choose **Add new records** for the **Import action**.
- Use the various controls on the form to match the column names in the input file with what Bandit is expecting.
- Press the **Import** button.

RaptorMed supports Bandit version 3.01 and 4.0. Note that in order for this to work, you must properly complete a **Release form** for each animal. The release form must include an accurate latitude/longitude as that is used to match the bird's release location to a location that is stored in Bandit. The matching process is done in one of two ways:

1. Use a **BanditLocations.xml** file. This file is typically created as part of your initial installation. Please contact customer service for help with this file.
2. Create Bandit release sites in the **Address Book**. This is the preferred method as it is much easier to manage and maintain.

Locking a record
A record can be locked against further edit by going to **Animal info** and checking the **Locked** checkbox. The chart will be marked with banner at the top that indicates the locked state.".

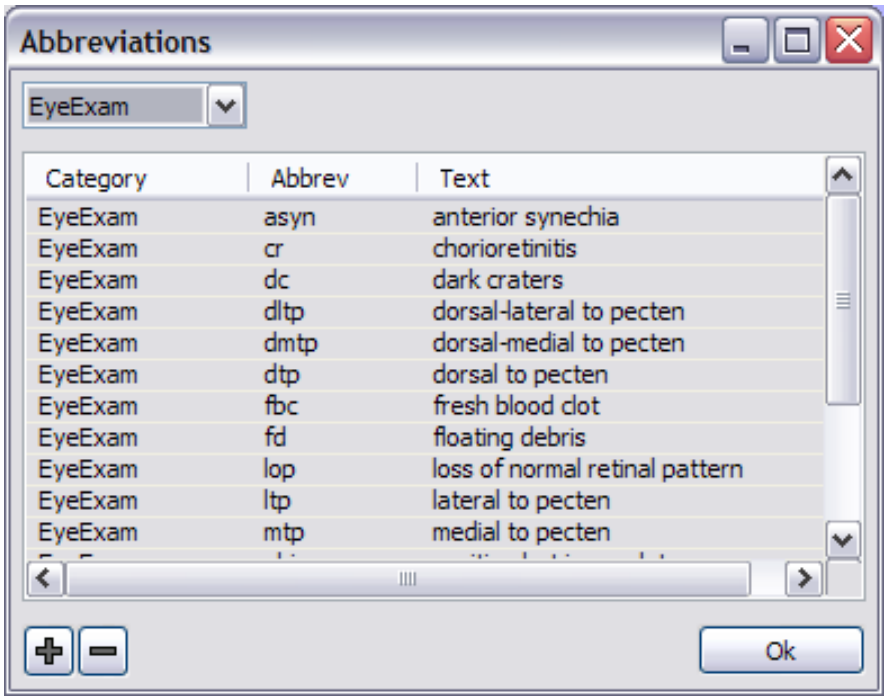
A record can be unlocked by right-clicking on the animal's chart in the animal list on the main screen. Choose **Maintenance ▶ Unlock this patient's chart.**

Multiple records can be locked based on admission date by choosing **Tools ▶ Maintenance ▶ Lock/unlock records.** You will be prompted to enter an admission date range. Press **Ok** to proceed.

Note that these functions are only available to users with **Maintenance** privileges.

Using abbreviations
When entering data, you can use predefined abbreviations that will auto-expand to a longer block of text. Abbreviations are available for use in:
- Individual animals medical records
- Enclosure record entries
- Complete blood count results
- Eye examinations
- Surgical reports
- Endoscopy reports

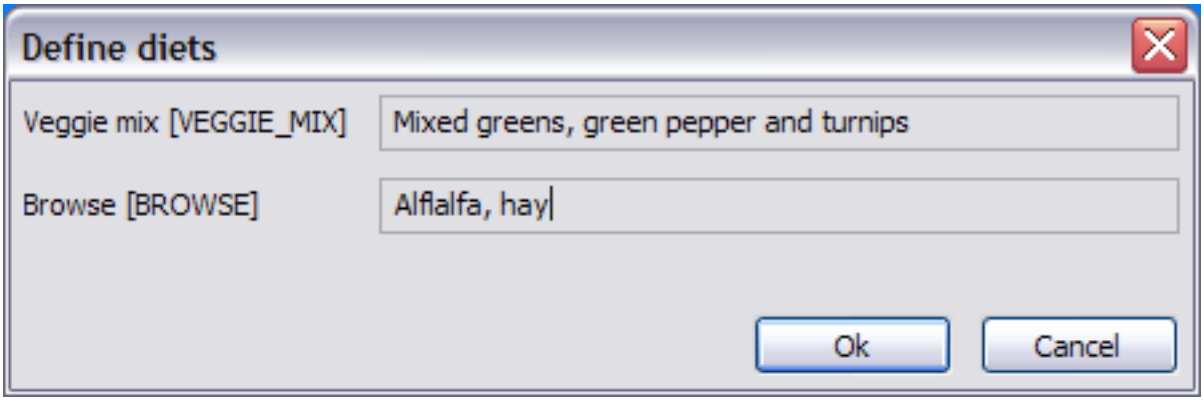
- Flight evaluations



In these forms, you will see a **Show abbreviations** link. Clicking this will display the **Abbreviation manager** screen. Abbreviations are categorized according the list above.
You can select a category to view the current abbreviations. You can add a new abbreviation for the currently selected category by pressing the **+** button and you can delete the currently selected abbreviation by pressing the **-** button.

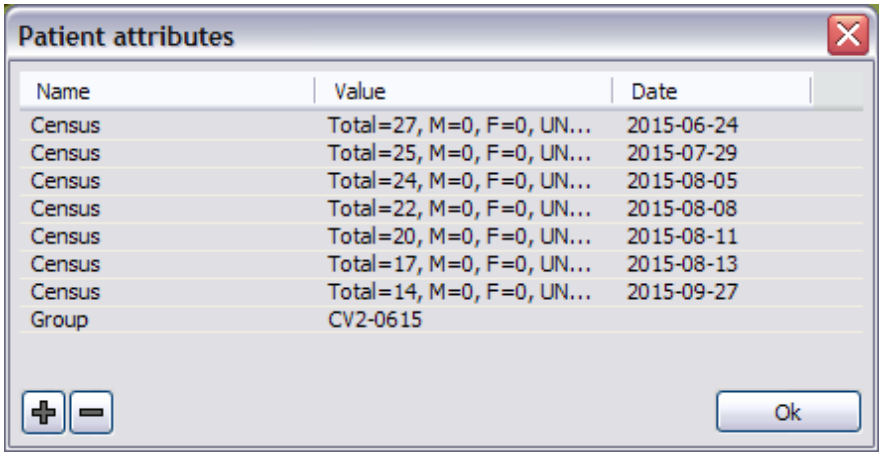
When you enter an abbreviation into the appropriate form fields, it will be auto-expanded when the record is saved.

Depending on how your system is set up, there may be a few special abbreviations that define specific diets. From the main menu choose **Tools ▶ Define diets.** A window will appear that allows you to define an abbreviation for two special diets. When **VEGGIE_MIX** or **BROWSE** is entered in either a individual record entry or an enclosure record entry, the abbreviation will be auto-expanded as specified in the **Define Diets** window..

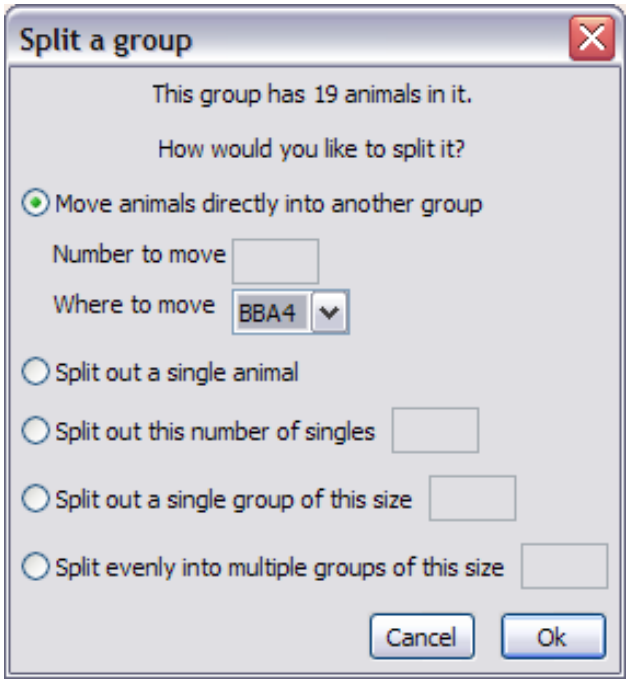


Group animals

This type of animal is not an individual. It represents a group like a school of fish or a collection of insects. Animals are generally managed as a group if you cannot distinguish individuals easily. The actual number of animals in the group is displayed in the **Notes** section at the top of the animal's chart. To indicate that an animal is a **Group**, check the **Group animal** checkbox. This number can be changed using the Update census command. The group number is actually stored in a an attribute and any number of census counts can be stored as shown in this example. The latest value is used but the previous ones are retained for historical purposes.



Groups can be split and merged as needed. A split might occur if you move half of the individuals of a species from one system to another. A merge might occur if you move, for example, 2 new animals into an enclosure that already contains 5 of the same species.



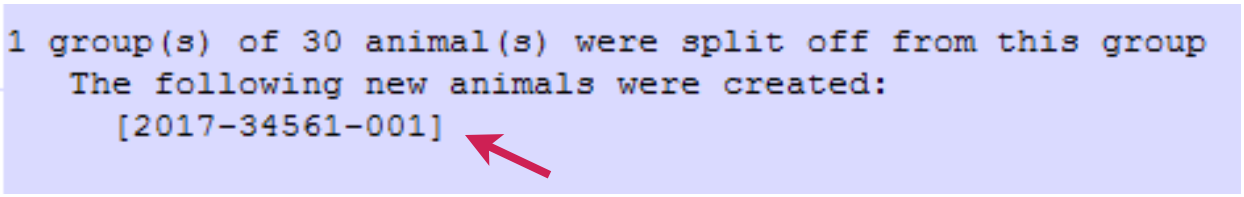
To split a group, right click on the grouped animal in question and choose **Maintenance ▶ Split group** from the menu. You have several options:

- **Move animals directly into another group** - in this case, specify how many animals to move and choose where to move them to. Only enclosures that currently contain the same species will be listed.
- **Split out a single animal** - in this case,

a single **non-group** animal record will be created.

- **Split out this number of singles** - in the case, specify how many animals to split. Each one will be split out as a new individual animal.
- **Split out a single group** - in this case a single group will be created of the specified size.
- **Split evenly into multiple groups** - in this case, multiple groups will be created. One group may have a few extra animals if the number of animals in the original group does not divide evenly by the new group size.

In all cases, the new animals will inherit all medical record history from the originating animal. A log entry will be made in the chart for the origination animal and in the newly created animal. The entries will have **[ANIMAL ID]** hotlinks (arrow) that allow you to easily jump to the new or originating charts.



To merge individuals into a new group, right click on the ungrouped animal in question and choose **Maintenance ▶ Merge into group** from the menu. The selected animal will be used as the source for all information in the new group. **Note that all animals that are to be merged into the group will be INACTIVATED**. Animals in the **Inactive** state have a status value of **I** and can be viewed at any time later but are no longer considered part of the live collection. Also note that only animals in the same enclosure are considered for merging and animals that are already grouped will be ignored.

Animals that that are already in groups can be manually merged into one group. For example, if there are 2 groups of fish with 30 animals in group 1 and 20 in group 2, you can merge them using the **Update Census** command. For the **New Count**, specify a total of 50 for group 1 and then press the **Ok** button. Group 1 now has 50 animals and you can add a record entry to describe the merge. Now simply delete Group 2 by right-clicking on it and choosing **Maintenance ▶ Delete this animal/patient.**

Importing a medical record

A medical record that was exported in **XML** format from another **RaptorMed** database can be easily imported. Choose **Edit ▶ Import ▶ Create new animal record** from the main menu. The entire record, including all lab results will be copied over and the next patient/animal id will be assigned to this new animal. This new record is identical to if you had entered all the data manually.

You can append the imported record to an existing animal by choosing **Edit ▶ Import ▶ Append to existing animal record.** Enter the animal's id when prompted and the imported file will be added to the specified animal's chart.

Recalculating doses for all animals

The doses for all medications for all or multiple animals can be re-calculated automatically. This is useful in situations where many animals may have undergone significant weight changes as is the case when dealing with young animals. To update doses, choose **Tools ▶ Update medication doses for all** from the main menu. A form will be presented that allows specific enclosures to be selected or you can press **Select all** to auto-select all enclosures. The doses for all animals in each selected enclosure will be re-calculated based on the most current weight.

View local weather

Choose **Help ▶ View weather** to open a web page displaying the local weather. The actual page that is used is configurable.

Configuring your system

Preferences

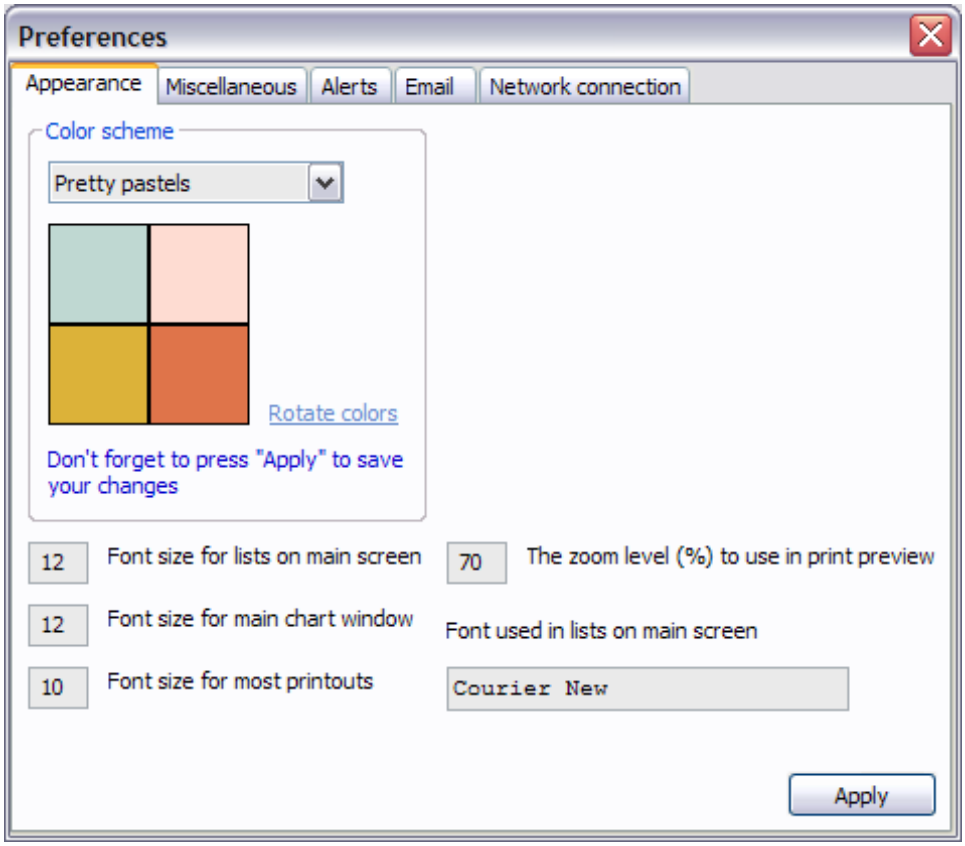
Choose **File ▶ Preferences** from the main menu to set preferences and various other settings. A window with several tabs will be displayed. Note that the actual tabs displayed depend on the specific privileges of the **RaptorMed** user that you are logged in as. Click here for more information on users and user privileges. In most cases, you will need to press the **Apply** button before your changes will be activated. In some cases, you may need to restart the program.

Most of the user-specific choices and preferences such as the colors, alerts of interest, or what to display are saved so that they will be used on any machine that you log in on. Others settings such as the those on the **Network Connection** tab are specific to machine. Finally, some settings including those on the **Email** tab and those regarding the **Patient of the week** are system-wide.

Appearance

This tab allows the appearance of the application to be customized.

You can choose from a list of pre-defined color schemes. Each color scheme has 4 colors for use in various areas of the interface. If you hover the mouse over each color, a tool tip will display where the color is used. There is a color for the background, highlights, contrast and accents. You can press the **Rotate colors** link to change the position of each color and you can double-click on a color to replace it with an entirely new color. Once you are happy with your color scheme, press the **Apply** button. The main screen will automatically reflect the changes. Animal charts will show the new color scheme one they are re-opened. As with the older interface, you can also change the size of the fonts used in various places.



You can also choose the **font size** that is used in the lists in the Main Window and on most printouts. If you leave these blank, then the default system font will be used. As a point of reference, the default size is typically around 10, a font size of 8 is very small and 18 is very large.

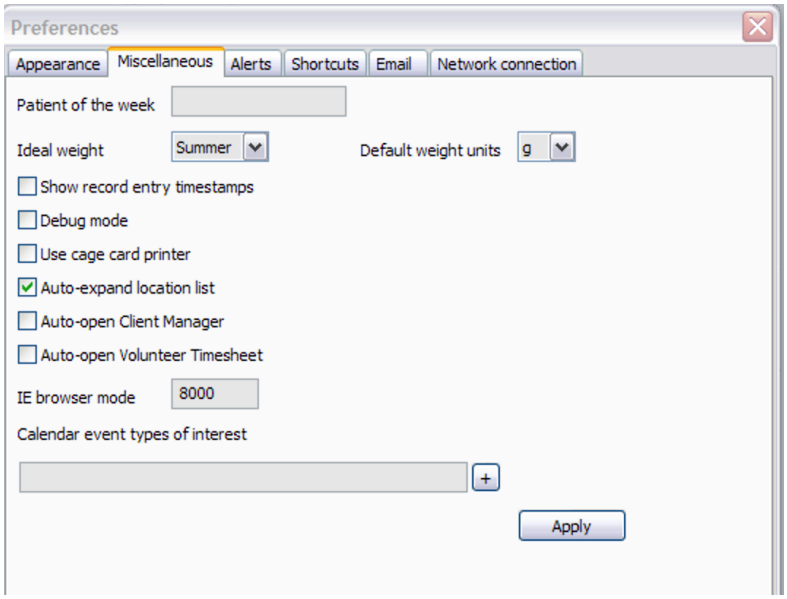
The default **zoom level** is used when you preview the various printouts before actually printing them.

You can also choose the font to be used in the lists on the main screen. It is sometimes useful to use a monospaced font such as **`Courier New`** as it makes animal id numbers and other data fields line up nicely.

The **Image scale** field is a multiplier that can be used to scale images and icons up or down on your screen. This preference is saved on each computer since the monitor resolution may be different on each computer. This field is particularly useful on Windows 10. An image scale of 1.0 will render images and icons without scaling them and a value of 1.5, for example, will increase the size by 50%. You may need to experiment a bit to see what looks best on your system.

Miscellaneous
This tab allows the following settings to be configured:

- **Patient of the week** - This determines which patient will be showcased on the **RaptorMed** web page.
- **Ideal weight** - Each patient can have an ideal weight specified for the summer and/or winter. See **Patient info** for details. This weight is displayed as an "ideal weight band" on the patient's weight chart. This setting allows you to choose which weight will be used for the weight band display. This setting should be updated based on the season.

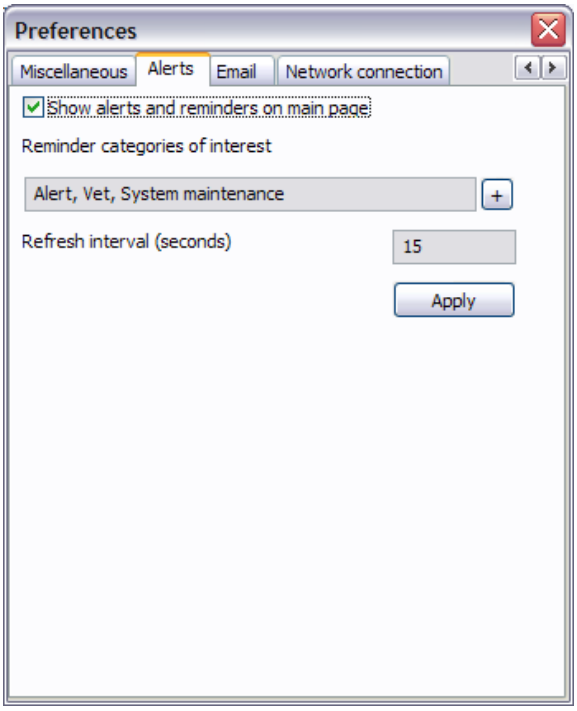


- **Show record entry timestamps** - If this is checked, then the last date and time that a record entry was updated will be displayed in the patient's record.
- **Debug mode** - For internal use only.
- **Use cage card printer** - If this is checked, the dedicated cage card label printer function is enabled.
- **Auto-expand location list** - If checked, then each entry in the Enclosure List on the main screen will be expanded to display each animal in each enclosure.
- **Auto-open client manager** - If checked, then the **Client Manager** window will be automatically opened when the user logs in.
- **Auto-open Volunteer Timesheet** - If checked, then the **Volunteer Timesheet** window will be automatically opened when the user logs in.
- **IE browser mode** - the field is used the configure the Internet Explorer browser control that is part of Windows. It is used to display HTML data including each animal's record. Setting this mode to various values can help correct display problems. The values can be 8000, 9000, 11000. Results can be somewhat hit or miss and depend on which version you are running on. Windows 10 definitely seems to have the most problems. If the display does not work correctly, try a different value and restart **RaptorMed**.

- **Calendar event types of interest** - Press the **+** button to then select which types of events you wan to display by default on your personalized **Calendar**.
- **Default weight units** - If present, this list allows you to specify the default units used when entering weights in the system.

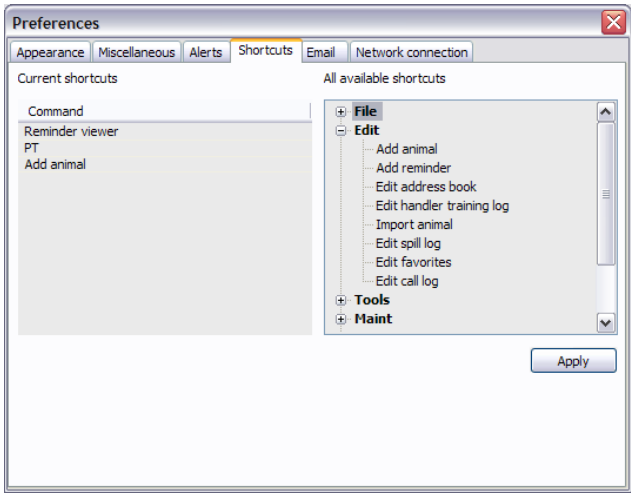
Alerts

These settings are used to control which alerts/reminders you are interested in seeing in the Alert Window on the main screen. If you would like to be instantly notified about various types of events and reminders, check the **Show reminders on main page** checkbox, press the **+** button to select the reminder categories of interest, and specify a refresh interval (15 or 30 seconds are good choices). Once you make your choices, press the **Apply** button. Note that you will have to restart **RaptorMed** for this change to take effect. Once restarted, you will start to see reminder alerts in the **Alert Window** on the main screen.



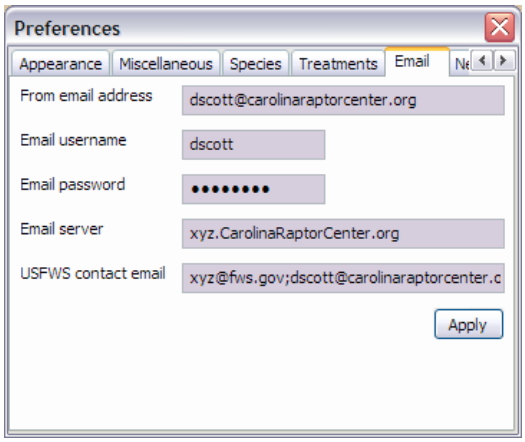
Shortcuts

You can choose menu commands that are used often and create a shortcut button at the top of the main screen. The left side shows the currently selected menu commands. Double-click on choices from the right side to add them to the list. Right click on an existing choice and choose **Remove** to remove it from the list. You changes will be seen after your restart **RaptorMed**.



Email

These settings are used to configure the function that allows **RaptorMed** to automatically sends emails for various situations. Click here for details. These settings are typically configured when the system is installed and should not need to be changed.



Network connection

Each **RaptorMed** workstation needs to have access to a shared folder on the **RaptorMed** server machine. In most instances, this access will be established automatically by Windows when you log onto your machine. In some cases, this does not occur and this tab allows you to manually configure access to this folder. There are two ways to get access: using a mapped drive or by using Remote Access. You may need to use one or the other, but not both. Contact RaptorMed customer support to figure out which way is best for your particular situation.

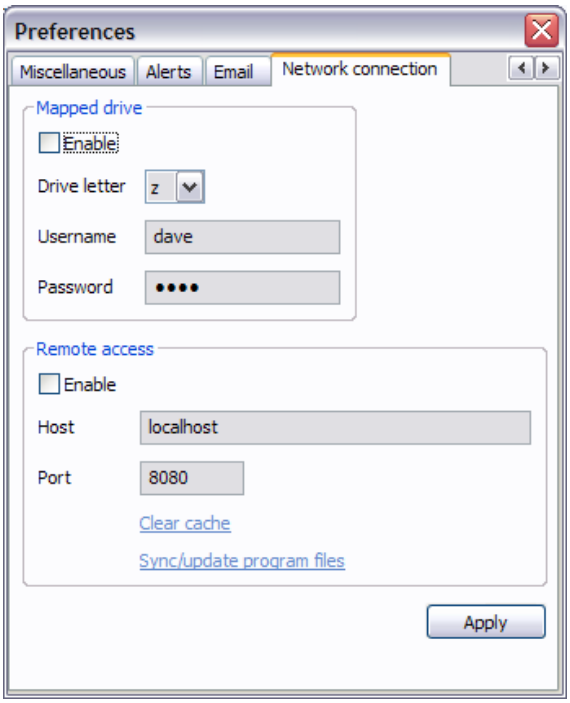
Using a mapped drive

In the **Mapped drive** section, check the **Enable** checkbox if this is necessary.

A drive letter must be specified in order to access to the shared folders. It should be a letter that is not already in use.

Enter the Windows login **username** and **password** required to access these folders. The username may need to be provided as a DomainName\Username pair. Your network administrator may need to provide this.

You will need to restart **RaptorMed** for the changes to take place. When



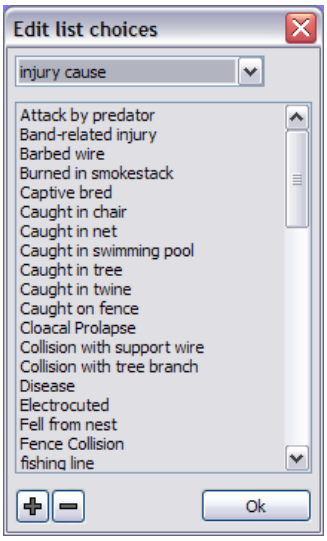
RaptorMed starts a command-prompt window will popup momentarily as the connection to these folders is established. As a test, try to view any image for an existing patient. If you can view an image, then you have configured this properly. If the images for any patient do not appear, then you may have entered the wrong username or password.

Remote Access
Another option for connection is to use what is referred to as **Remote Access**. If this is required, check the **Enable** checkbox and provide a **Host** and **Port** setting (these will be provided for you). In order for you to login using Remote Access your **RaptorMed** user must have the **Remote Access** privilege checked in the **User Manager**.

Remote Access is very useful in some situations, however the automatic update process that occurs when using a "normal" connection does not work via **Remote Access**. Therefore, when a system update has occurred, it is important that you press the **Sync/update program files** link immediately after logging in after an update.

When using **Remote Access**, image files and other attachments are cached on your local workstation. Although, usually not an issue, this can start to accumulate and waste some disk space. Pressing the **Clear cache** link will free up disk space that was in use.

List choices
There are lists to choose from throughout the program. In general, the choices in these lists are configurable. To edit these choices, select **Tools ▶ Maintenance ▶ List choices** from the main menu. A window will appear that allows you to select the category/list you want to edit. You can add a new entry by pressing the **+** button. You can delete the selected choice by pressing the **-** button and you can edit the selected choice by double-clicking it. The following category/lists can be edited:



- **Age** - Used to specify the patient age on admission and the current age.
- **Chemistry source** - Used to specify the source of the results for blood chemstries.
- **City** - Used to specify where an animal was found or released and for making entries in the Address Book.
- **Clinicians for consult** - Used to schedule a consult with a specific clinician on the treatment sheet.

- **Collection method** - The methods used by aquariums to capture fish from the wild.
- **Collection vessel** - The vessels/boats used by aquariums to capture fish from the wild.
- **Consult** - Used in the individual treatment plan to specify a service or hospital section that is needed to perform a consult.
- **County** - Used to specify where a patient was found and for making entries in the Address Book.
- **Crude type** - The different types of oil involved in spills.
- **Department** - Each location can belong to an specific organization department. The main screen can be configured to only show locations in a department.
- **Diluent** - Used by the **Dilution calculator**.
- **Dosage units** - The units used to specify a dose per kg. Used by the Medication Editor when setting up a dosage for a liquid drug. The typical value is **ml**.
- **Drinking water** - The types of water that are listed as options in the Individual treatment/feeding plan.
- **Ear medication type** - These are the choices available when ordering ear medications on the treatment sheet.
- **Enclosure maintenance** - The Enclosure Maintenance Log uses these entries as choices for logging maintenance events. Each entry should be of the following format: `category – description`. For example: `Monitor – Flow rate`.
- **Enrichment behavior** - These are used to fill the behavior list on the Enrichment form.
- **Eye antibiotic** - These are the choices available when ordering ophthalmic antibiotics on the treatment sheet.
- **Eye NSAIDs** - These are the choices available when ordering ophthalmic NSAID medications on the treatment sheet.
- **Fecal parasites** - Used when recording results of fecal examinations.
- **Fecal type** - The types of fecal flotations that are available to choose from in the **Fecal** entry form.
- **Formula** - These are the choices available when ordering formula on the treatment sheet.
- **Image type** - Used to specify the type of image when a new image is dragged and dropped onto a patient's chart.
- **Injection site** - Used to specify where a vaccination was given.
- **Injury cause** - Used to specify the cause of injury.
- **Inventory units** - Used by the Inventory manager. These are the units of measure for the different supply items.
- **Keyword** - Used to save special keywords in the patient's chart. These can be used to search for patient's with special problems or that were treated with special treatments.
- **Lab results source** - Used to record the source (i.e. lab or instrument) that generated the results of a specific sample test.
- **Lab test** - Used to specify a lab test that was run on a sample.

- **Lead source** - Used to specify where the blood lead results are from. This can be a laboratory or an in-house device such as a Lead Care.
- **Lead units** - Used the specify the choices for the units used to report lead levels. Typical choices are ug/dL or ppm.
- **Patient attribute** - Each animal can have any number of attributes that store miscellaneous information. Each attribute must have a name and these are configured here. See Patient attributes.
- **Patient skill level** - Used to specify the skill level required to do a treatment on a particular patient. This option may not be available in all installations.
- **Problem** - Used to record the various problems and diagnoses.
- **Program ages** - These are the age categories used to record attendance at a program
- **Program type** - These are the types of presentations that can be utilized when doing a program.
- **PT location** - The choices for which part of the body is receiving physical therapy.
- **Release id type** - Used to specify the type of release identification device that was used when a patient is released. Typical choices include **Leg band** and **ear tag**. This choice is made on the **Release** form.
- **Reason for euthanasia** - Used to specify the reason that a euthanasia was performed.
- **Reminder category** - Used to categorize reminders. They can be any descriptive text such as a department or person's name and can be used to sort the reminders in the Reminder Viewer.
- **Sample collection location** - Used to specify where a sample was collected from. For example, a cytology sample could have been taken from a skin scrape or a gill biopsy.
- **Sample type** - Used to specify the type of sample (i.e. blood, biopsy, etc.).
- **Species group** - Used to specify a group of species such as avian, avian:raptor, avian:songbird, or mammal. Note that the species groups are hierarchical and each sub-category is separated by a colon.
- **Staff training** - Used to specify various categories for staff training.
- **Stain** - Used to specify the stain that was used in preparing a cytology slide.
- **State** - Used to populate all the lists that allow a state to be chosen.
- **Surgical procedure** - Used to specify the procedure that is described in a surgical report.
- **Tag type** - The type of tag used to identify aquatic animals. PIT tag is the most common choice for this.
- **Taxonomy_xyz** - These are used to fill the taxonomy lists in the Species Editor. There are separate lists for kingdom, phylum, class, order and family.
- **Tracker type** - Used the specify the type of tracking device that may have been used when a patient is release. This choice is made on the **Release** form.
- **Training behavior** - These are used to fill the behavior list on the Training form.
- **TrainingXYZ** - These are used to fill the various fields on the Training form. There are separate lists for bridge type, flight type, reinforcement type and target type.

- **Transfer reason** - These are added to the **Reason** list on the **Transfer** form.
- **Urinalysis clarity** - Used to record urine clarity.
- **Urinalysis color** - Used to record urine color.
- **Urinalysis test results** - Used to record the results for the various tests in a urinalysis panel.
- **Vitamin type** - Used to specify the type vitamins that are to be used in individual treatment plan. Not currently used.
- **Volunteer labor category** - Used to track volunteer hours.
- **Volunteer training** - Used to specify various categories for volunteer training.

Admission questions
The system can be configured so that the person delivering an animal can be asked a series of pre-determined questions. Up to five questions can be asked and they have must be set up in the following format:

```
Question? [answer1,answer2,etc]
```

For example:

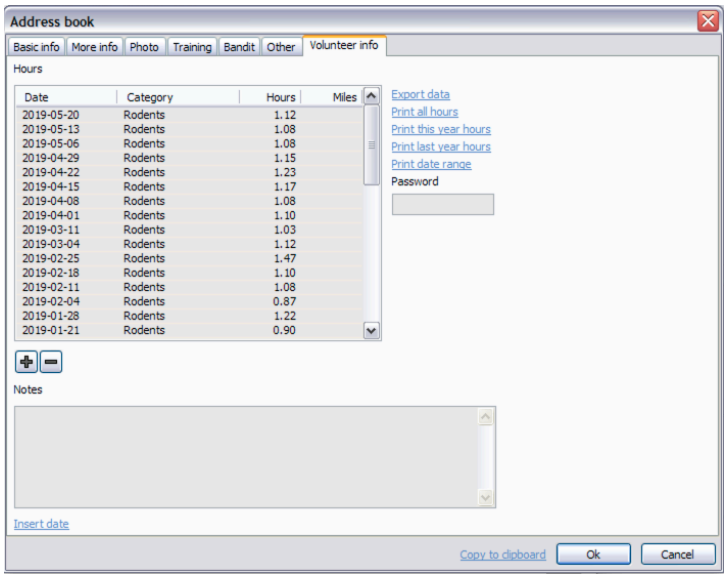
```
How did you hear about this wildlife center? []
Would you like to be placed on our mailing list? [yes,no]
```

In the first case, the answer is free-form and you can type in anything. In the second, case, you must choose from one of the preset answers. The **fourth** question is special in that it drives the Outstanding disposition letter function. Any animal with a **YES** answer for **Question 4** will be included on this report.

Volunteers and volunteer management

A volunteer is defined as any entry in the **Address Book** that has the **Volunteer** check box checked. The system can be used to track volunteer training, hours and mileage.

Volunteer information can be accessed directly through the **Address Book** or through the use of the **Volunteer Manager** (see below).



Each volunteer entry will have another tab (**Volunteer info**) enabled in the **Address Book** entry. This tab displays all their hours and miles as well as a work category associated with those hours and miles. The work categories are configured in Edit List Choices.

To add hours, press the **+** button, double-click and entry to edit it and press the **-** button to delete the selected entry.

There are links to print all hours, this year's hours, last year's hours or all hours in a specified date range. The raw data can also be exported to the clipboard for use in another program such as Excel.

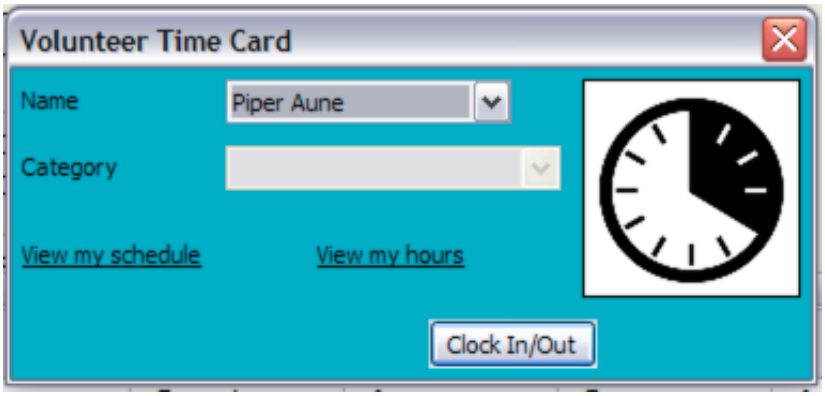
A **password** can be entered for use by the volunteer when logging into the RaptorMed Timesheet (see below).

Finally, there is a **Notes** field that the Volunteer Manager can used to record notes about the volunteer. The I**nsert date** link will automatically insert today's date when making a new entry.

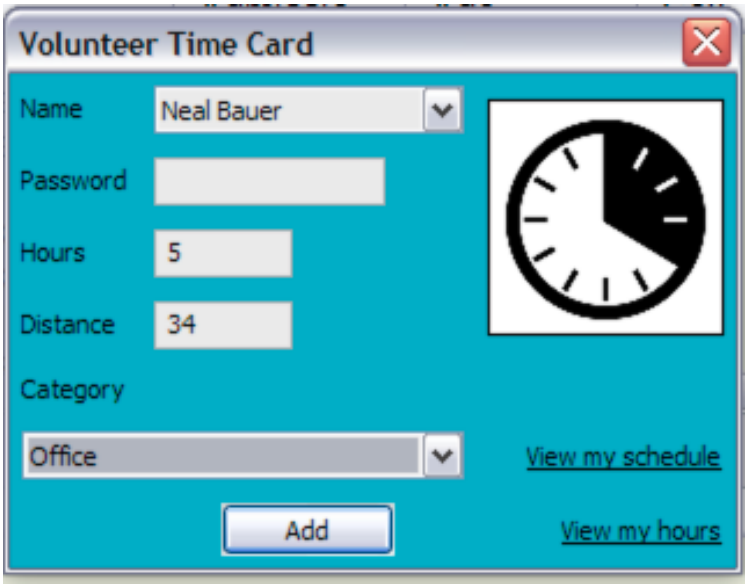
Volunteer timesheet

The timesheet can be used by a volunteer to record hours and mileage. It is accessed by choosing **Tools ▶ Volunteer timesheet** from the main menu. It can also be set to automatically open when RaptorMed is started by checking the **Auto-open Volunteer Timesheet** checkbox on the Miscellaneous tab in **Preferences**. It can be used in two ways:

As an actual time clock where the user clocks in and out
In this mode, the user presses the **Clock in/Out** button to clock in. Note that the labor category field is disabled. An optional password field is available depending on how the system is configured. When the shift is over, the volunteer chooses a labor category and presses **Clock In/Out** again. The volunteer can view their upcoming scheduled calendar events or view their past hours by selecting the available links.

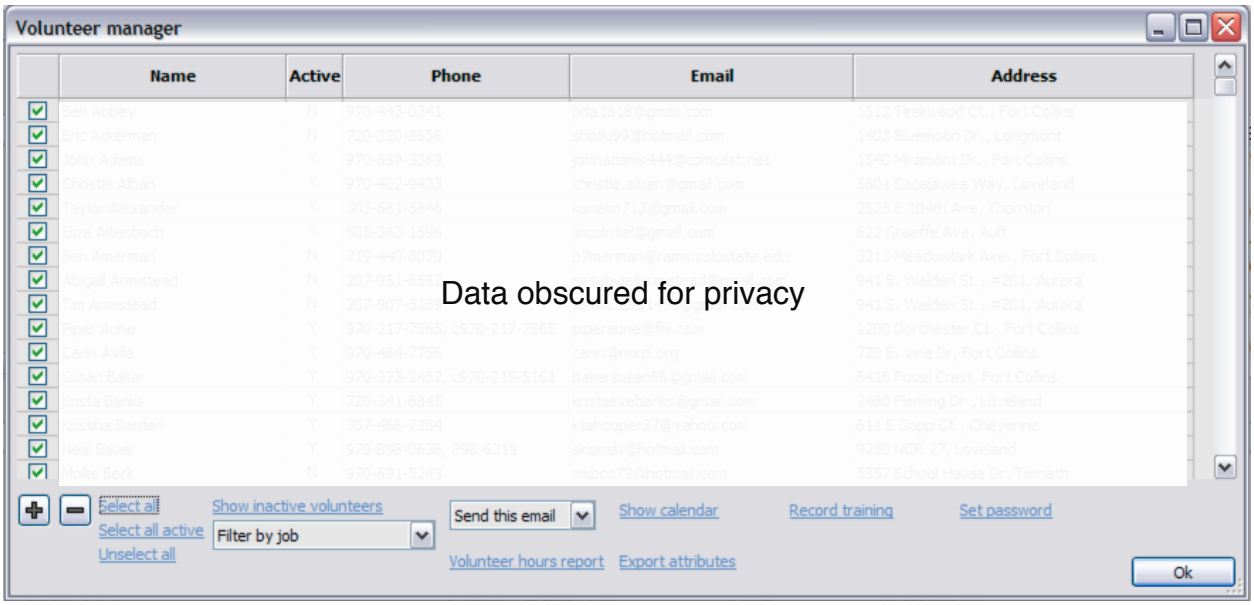


As a simple recording to device where the volunteer specifies hours works and miles driven.
In this mode, the user records their hours and miles at the end of the shift. As before, a labor category must be selected.



Volunteer Manager

The **Volunteer Manager** brings many volunteer-related functions and reports into one window. It is accessed by choosing **Tools ▶ Volunteer manager** from the main menu. The main window contains a list of volunteers. By default, only active volunteers are displayed. You can include inactive volunteers by clicking **Show inactive volunteers**.



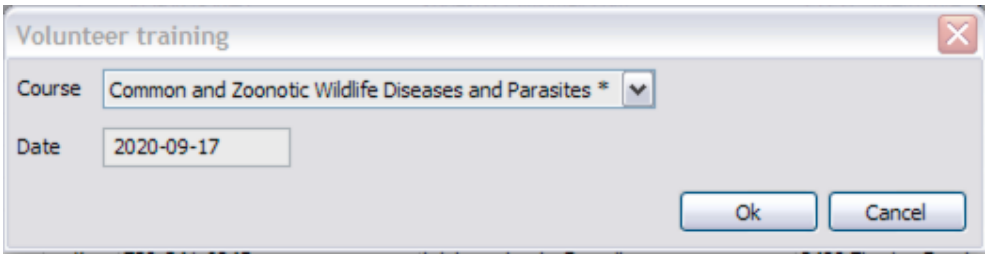
You can add a new volunteer by pressing the **+** button, edit an existing entry by double-clicking on it or you can delete the selected entry by pressing the **-** button.

The **Filter by job** list can be used to display only those volunteers that have recorded hours in a specific labor category. So this can help you find a volunteer that has experience doing a particular task. To return to the full list, just choose the default “Filter by job” choice at the top of the list. Note: the volunteer labor categories are configured using **Edit List Choices** (choose **Volunteer labor category**).

The **Send this email** list can be used to send an email based on a pre-defined template to a specific volunteer or volunteers. Just select at least one volunteer and choose an email template from the list. Please contact Customer Support for help in creating templates.

Press **Show calendar** to view the **Calendar**. This can be configured to display various events and which volunteers are working each event.

Select at least one or more volunteers and press **Record Training** to record a training session. A window will appear that allows you to choose from the list of volunteer



training options and to select a date. Note that the list of training choice is configured in **List choices** by choose the **Volunteer training** option.

Select at least one or more volunteers and press **Set password** to set the password for each selected volunteer.

The **Volunteer hours report** will generate an hours report for all volunteers during a user-defined time period. The hours are broken down by labor category and the total mileage is also tallied.

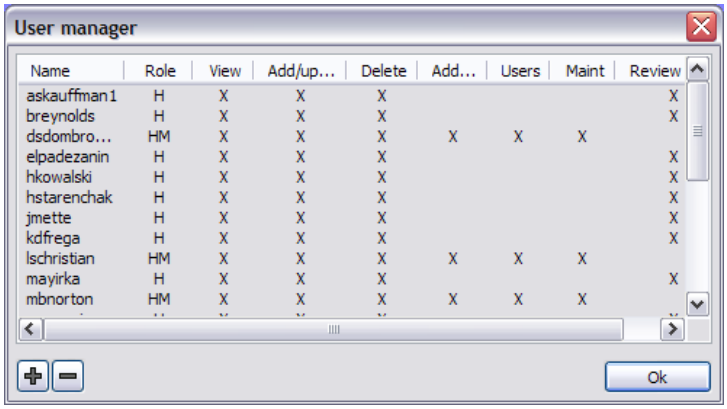
If enabled on your system, the **Who's clocked in?** report can show which volunteers have clocked in for a shift but have not yet clocked out.

The **Export attributes** command tabulates attributes for each volunteer. Attributes are user-defined data fields that can be added for volunteers. Volunteer attributes are explained **here** but they can basically be used to store random information like `Emergency contact`, `Has rabies vaccine?`, or `Drivers license`. This command allows you to choose, `Has rabies vaccine`, for example and see a tabulated list for each volunteer. The results can then be viewed, printed or exported to the Windows clipboard.

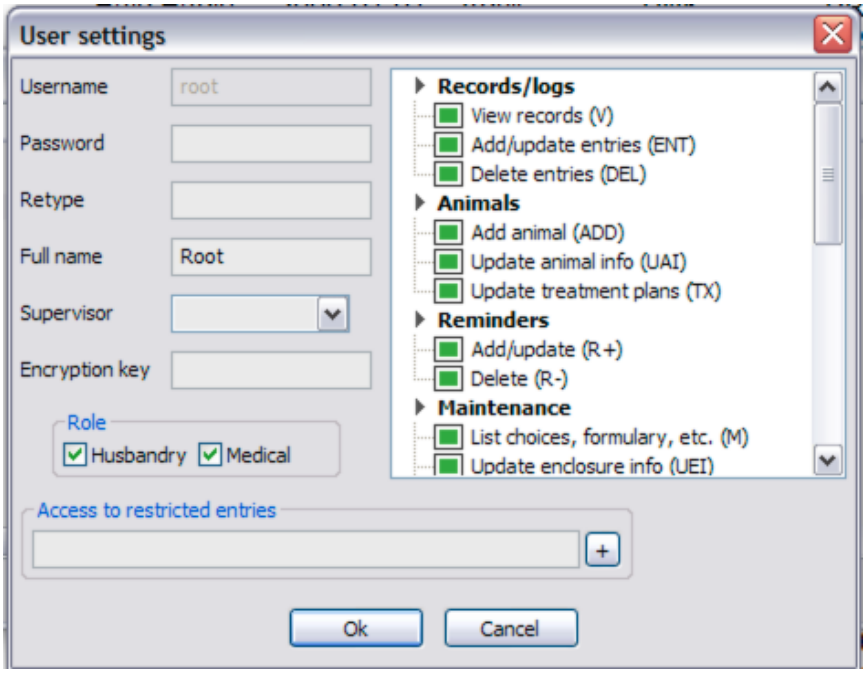
Users and user privileges

Users can be managed by choosing **File ▶ User manager** from the main menu. You must be logged into **RaptorMed** as a special user whose has User Management privileges. The login name is typically **root** but this may vary depending on how your system is configured. Regardless of the actual login name, this user should only be used when you need to manage or add a user; not for day-to-day use.

The **User Manager** displays all the current users and shows what role and privileges each user has. You can add a user by pressing the **+** button and you can remove the selected user by pressing the **-** button. To edit a user, just double-click on it.



Each user has a **Username** that is used to login, as well as a **Full name** that is used for display purposes and when selecting users from various lists. Each user can also have a specified **Supervisor**.



You can select any number of privileges for a user. It is always best to select only the privileges that are absolutely needed for that user.

The following privileges are available:

Records/logs

- View records (V)
- Add/update entries (ENT)
- Delete entries (DEL)

Animals

- Add animal (ADD) - The ability to add animals to the database should usually be limited to certain people.
- Update animal info (UAI) - This form has alot of important fields including the location field make sure the right people can access this function.

- Update treatment plans (TX) - Anyone in a position to setup and manage treatments should have this privilege.

Reminders

- Add/update (R+)
- Delete (R-)

Maintenance

- List choices, formulary, etc. (M) - Only managers should have access to these functions.
- Update enclosure info (UEI) - This allows the user to make changes to an enclosure's configuration data.
- User management (USR) - This allows access to the **User Manager**. Note that the user still need to be logged in as the **root** superuser in order to make changes.

Restrictions

- Requires review (REV) - This option means that this user's entries need to be approved by a supervisor in order be considered finalized. Entries made by these users that include anything other then simple text (i.e. lab results, any attachment, or data entered via a data-entry form) will have be automatically given an entry type of of. These entries will remain in this state until a supervisor has reviewed them. See the **Entries that need review** function for more information. Note: this review process applies to entries made in an animal's chart as well as entries made in an enclosure's log.
- Remote access (RA) - This option indicates that this login can be used to access the system via the **Remote Access** interface.

Other

- Use address book (AB) - This allows access to the **Address Book**.
- Edit calendar events (CAL) - This allows the user to create and edit calendar events.
- Use call log (CALLS) - This allows access to the **Call Log**.
- Use client manager (CM) - This allows access to the **Client Manager**.
- Use contact transporter function (CT) - This allows users to use the **Contact Transporter** function which sends text messages to transporters.
- Edit document repository (DOC) - This allows the ability to add documents to the **Document Repository.**
- Manage donations (DON) - This allows access to the **Donation Manager** function. Note that any user can record a donation when initially adding a new animal. But only users with the DON privilege can edit or view the donation later.
- Send emails (EM) - This allow users to send the various pre-formatted emails for an illegal cause of injury or the admission of a species of concern.
- Use event planner (EV) - This allows access to the **Event Planner.**
- Use handler training log (HTL) - This allows access to the **Handler Training Log**.
- Use inventory manager (INV) - This allows access to the **Inventory Manager.**
- Access human resources data (HR) - This is includes the **Volunteer Manager** and specific personal data fields such as the birth date in the **Address Book**.

A typical user should have **View (V)**, **Add/update (ENT),** and **Delete (DEL)** privileges. You may also want to grant **Add patient** privileges to specific users. Only administrator or management-type users should have **User management (USR)** or any of the **Maintenance** privileges.

Note: **Delete** privileges only allows a user to delete a record entry or a lab report. It does **NOT** allow a user to delete a animal. This requires a user with **Maintenance** privileges.

Users also have a **role** which defines what their job entails. Currently, the system supports a **Husbandry role (H)**, a **Medical role (M)** or **Both (HM)**. The user role may affect what functions and features are available to each user. However, actual effect that the role has on the program is very dependent on how your installation is configured. In some cases, the role may be completely ignored.

You can also control the access users have to certain record entry types. For example, you can configure the system so that all entries of type "**Confidential**" are to be restricted. That means that only certain users can edit or modify them. All users can view the record but only specific users can modify them. In order go grant edit privileges to a restricted record type, press the **+** button in the **Access to restricted entries** field and choose the entry types that this user should be able to edit.

Maintenance

The **Maintenance** menu is only available to **RaptorMed** users with **Administrator** privileges. Click **here** for more information on User privileges. This menu contains the following areas that allow for the system to be configured and maintained.

Increment ages
This command can be used to update the age of each active patient. It currently only works for patients whose ages are specified using the age scheme utilized by the USGS Bird Banding Lab (BBL). Specifically, ages such as L, HY, AHY, SY, TY, 4Y, 5Y, 2, 2+ will be properly incremented but other age values will be ignored. As birds are deemed to have aged one year on Jan 1, this command should be run in early January.

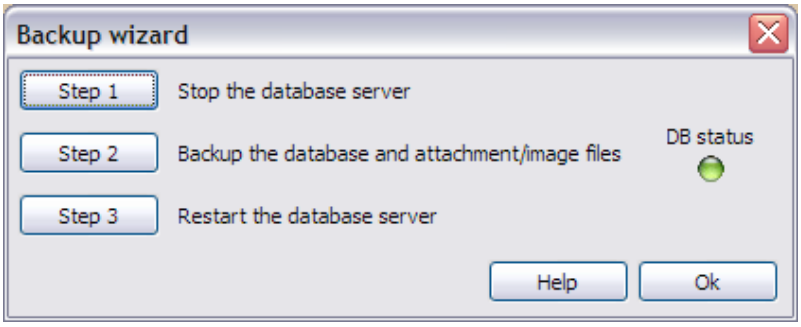
Note that this command cannot be undone so you will be prompted twice to proceed before the operation will take place. Also, all animals admitted in the current year will not be incremented. So, if it is Jan 5 and you run the the command today, the age of a bird just admitted yesterday as SY will not be incremented as it is assumed the age given on admission is accurate.

Update license key
This command allows a new license key to be entered. See Licenses below.

Backing up the database
The database should be backed up frequently. In order to do this, you can access the **Backup Wizard** by choosing **Tools ▶ Maintenance ▶ Backup database** from the main menu. Note that you must have **Maintenance** privileges to access this function. Click **here** for more information on User privileges.

> **Notes:**
> In order to run this command, the Windows user that you are logged in as must have Administrator rights on the computer. This is sometimes complicated, especially on Windows 7, so you may need assistance from your network administrator.
> Also realize that the database will be offline for the short period of time that is required to perform the backup, so you should plan to do the backup during a slow period or after hours.

When you press **Step 1**, a window will pop up momentarily. This stops the database and the **green** light should change to **red**. If the color does not change, then your Window's user account probably does not have the correct access rights.

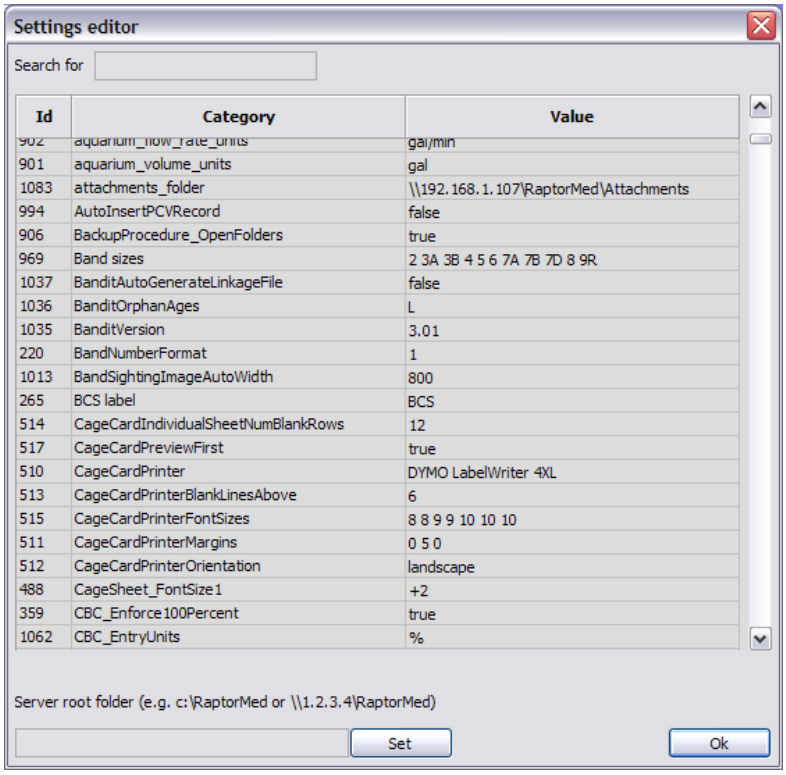


Once the light has turned **red**, press **Step 2**. This automatically opens each folder that has data that needs to be backed up. This is done as a convenience for you but the actual backup procedure that you must perform depends on if you are burning the data to a CD/DVD or copying it to a secure network drive.

Once the backup procedure is complete you can close all the folders that were opened in **Step 2** and press **Step 3**. A window will popup again to restart the database and the light should turn back to **green**. At this point, the backup procedure is complete.

You can view the history of all backups by choosing **Help ▶ About** from the main menu. A list of all database maintenance, including backups and updates, will be displayed.

Settings editor
The Settings editor is used to do maintenance or make configuration changes to the database. It is accessed by choosing **Tools ▶ Maintenance ▶ Settings editor** from the main menu.



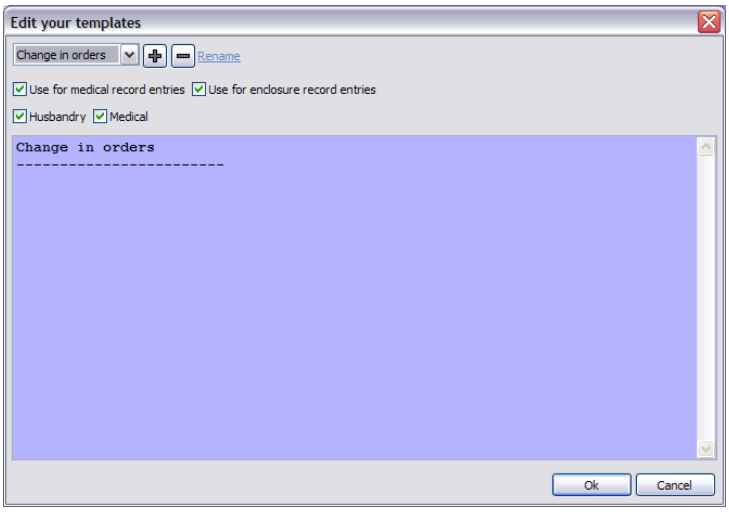
Each setting is a category/ value pair. The categories are fixed but the value can be edited by double-clicking on it. You can search for a specific category by entering text in the Search field. Some categories can have multiple entries while some should only have a single entry. This depends entirely on what the category is.

This function is generally for internal use only or should only be used under direction from **RaptorMed** technical support. Note that you must have **Maintenance** privileges to access this function. Click **here** for more information on User privileges.

Text template editor
The text stings that can be automatically inserted into a medical record are listed at the top of the list on the right-hand side of the medical record entry form and also in the Enclosure Log entry form. These can be edited using this tool that is accessed by choosing **Tools ▶ Maintenance ▶ Template editor.**
A window is displayed that displays each template.

Select a template by choosing one from the list. You can edit the template's text that is displayed in the large edit fields.

Add a new template by pressing the **+** button.
Remove a template by pressing the **-** button.
Rename a template by pressing the **Rename** link.



You can specify whether this template should be available for individual animal record entries and/or enclosure record entries by checking the appropriate boxes.

You can also specify whether each template is available to users based on their role (i.e. **Husbandry** vs **Medical**, or both).

If the template name begins with some text followed by a space dash space as in:

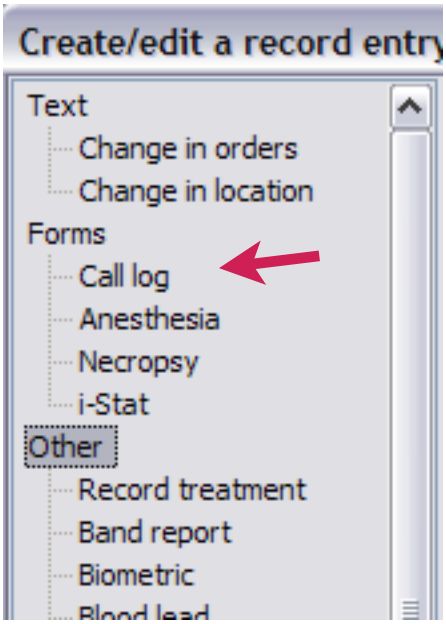
```
Husbandry - Coped beak
```

then the part before the dash will be used as an organizing folder with a template called "**Coped beak"** listed inside it. By using this naming format convention, you can arrange and organize many templates.

Data Entry Forms

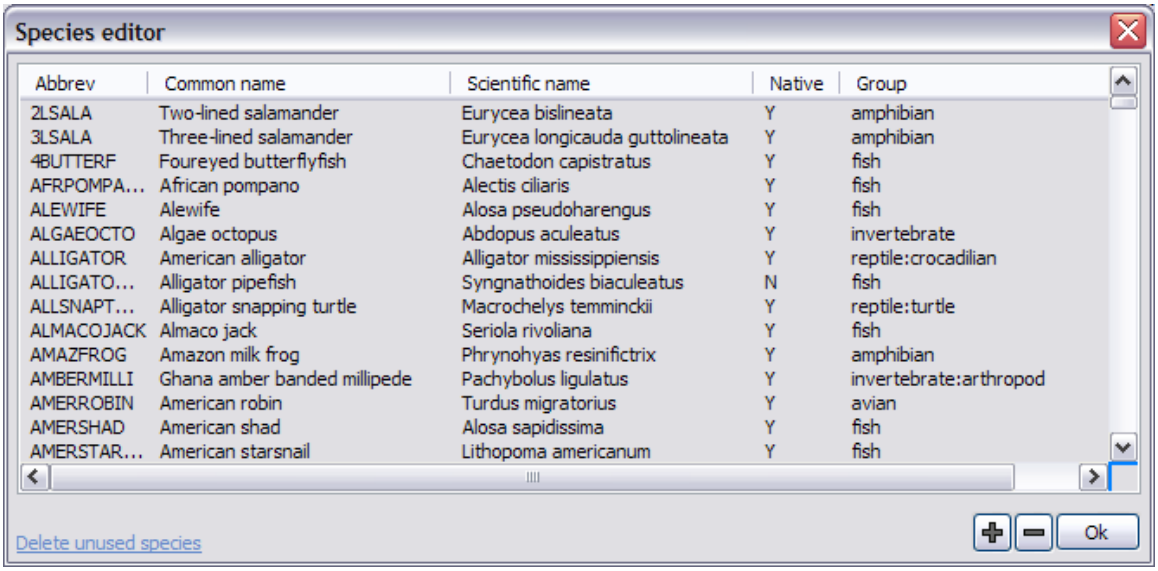
The system allows any number forms to be created to facilitate the any sort of form-based data. Each form can have check boxes and text entry fields. These forms are listed in the Medical Record Entry form in the tree control on the left hand side under **Forms**. Just double-click on one of the options and the form will appear.

Please refer to the **Technical Reference Manual** for details on creating these forms.

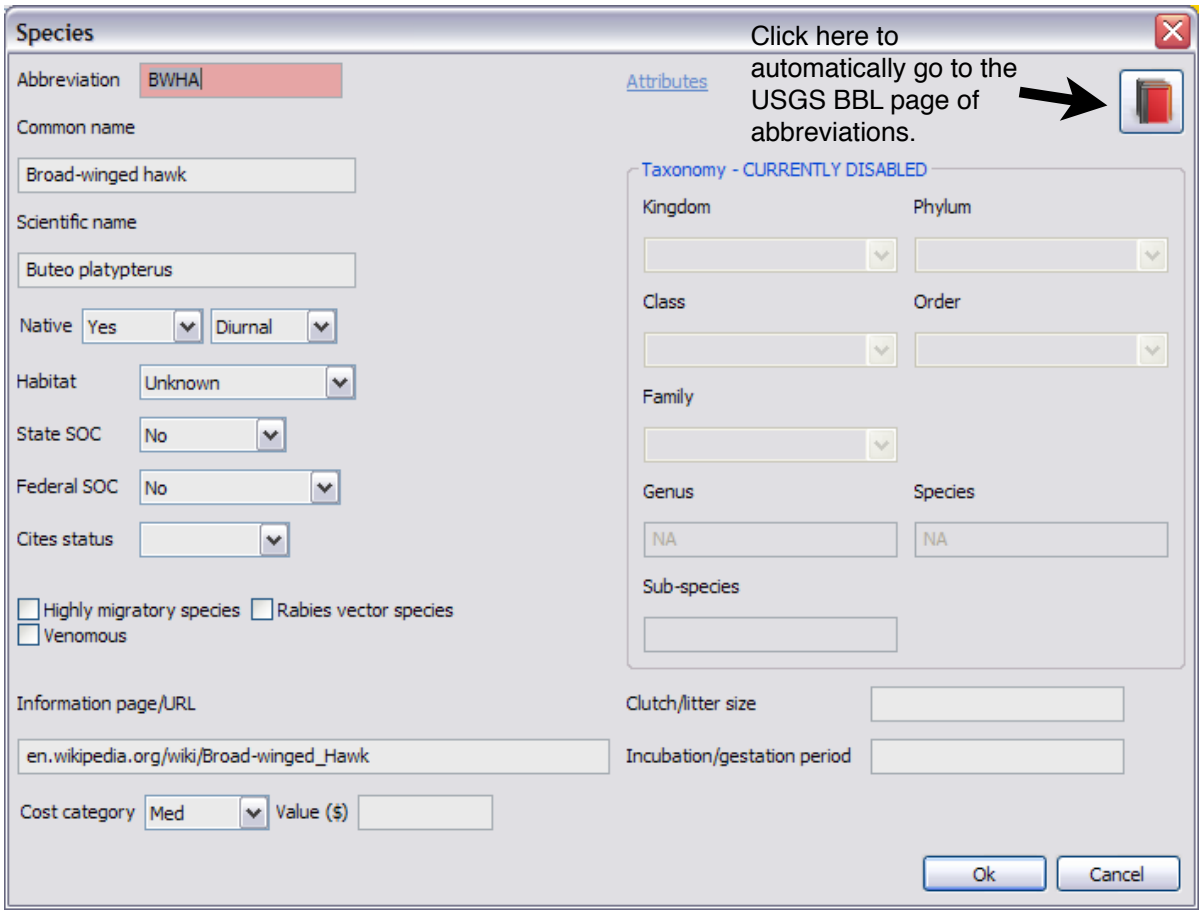


Species editor
This list of species programmed into the system can be edited and modified as needed. These can be edited using this tool that is accessed by choosing **Tools ▶ Maintenance ▶ Species editor.** To add a new species, press the **+** button. To edit an existing species, double-click on it. To delete the selected species, press the **-** button. Note that you can select more than one species using the shift and control left-click key combinations. Also realize that the system will not allow you to delete a species that is in use. You can sort the list by clicking on each column heading.

You can remove any unused entries from the list by pressing the **Delete unused species** link.



When adding or editing a species, the following form appears. There are fields for the **Abbreviation**, **Common name**, **Scientific name.** For birds, the four-letter abbreviations specified by the **USGS Bird Banding Lab** (BBL) are typically used, although, this is not absolutely required. For non-avian patients, you can used any scheme that works for you. Many facilities use the genus/species as the basis of the abbreviation. For example, the opossum is *Didelphis virginiana* so its abbreviation could be **DIVI**. Another option is to create easily recognized abbreviations for a species so the opossum could be **OPOS**. Any abbreviation can be used as long as two species do not have the same abbreviation.



You can specify whether the species is **Native** or not and whether it is **Diurnal or Nocturnal**.

You can specify whether this species is a **Species of concern** (i.e. threatened or endangered) in your state/region or nationally. This is important because the system will remind you to report species of concern when admitted. In addition, you can specify the **CITES status** and the **USDA classification**. The **USDA classification** field is used to include animals in the various USDA reports.

You can specify if this is a **Highly Migratory Species** (important when creating HMS reports) and the system can optionally alert you (when the animal is admitted) to record the proper biometric data that is required for the HMS reports.

You can specify if this is a **Rabies Vector Species** and the system can optionally alert you (when the animal is admitted) with a custom message that can provide additional instructions that may be required. For example, your state or county may require

additional information or paperwork to be be filled out and this optional alert message can provide the proper guidance.

You can specify if this is a **Venomous Species** and an alert banner will be automatically printed on the animal's cage card, and a highlighted banner will the main medical record page.

The **Habitat** can also be specified. This may be important for various reports.

If enabled on your system, you can also specify the entire **Taxonomy** from kingdom to sub-species. This is important for various census reports required in zoo settings.

You can specify an **Information page/URL** as well. This page will be displayed when the user right-clicks on a patient and chooses **Show species info page**. Wikipedia has a very good set of pages for a wide range of species. If you leave this field blank, the system will automatically use Wikipedia and will attempt to search for the proper page. Note that the prefix `http://` is **not** needed.

Attributes - click on this link to add any number of attributes for this species. Attributes are name/value pairs and can be used to store all types of information. An example would be something like:

```
Ideal temp = 75.
```

This data can be used as a reference, in reports and can also be automatically printed on **cage cards**.

The **Cost category** is used by the **Cost Estimator** function and this setting helps determine the per day cost for a patient of a particular species.

The **Value** field can be used to assign a monetary value to a specimen of this species. This is used in the **Collection Value Report**.

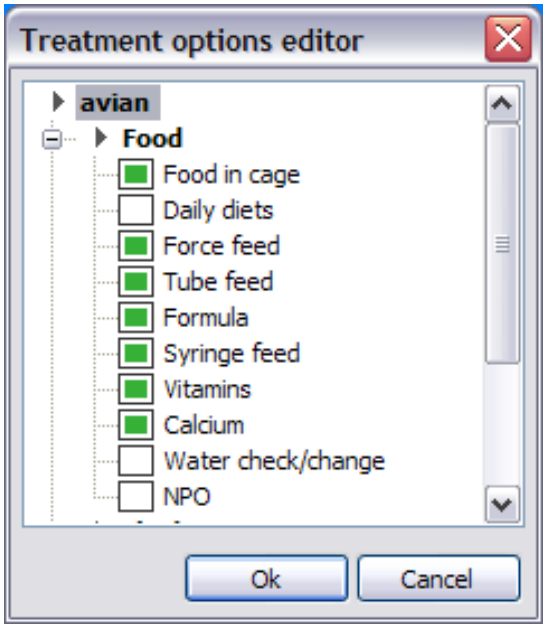
The **Clutch/litter size** field and the **Incubation/gestation** fields can be filled in if your organization is involved in breeding operations. **The Incubation/gestation** field can be filled in with a single number of days or a range of days as in "28-30". This field is used by the **Egg Tracker** to determine if an egg is late to hatch.

A global "`System maintenance - Please restart ASAP`" message is generated when specific maintenance functions are carried out. These are important as each user needs to restart the application in order to get the latest changes. Because of this, it is good practice for all users to "subscribe" to alerts of type **`System maintenance`** so that they can receive timely alert messages in their Alert window. The following maintenance functions will trigger this alert:

- Changes to a drug formulary
- Changes to the treatment options
- Changes to the automatic alerts
- Changes to the medical record text templates

Treatment options editor

The **Treatment Options Editor** allows you to choose which non-medication options are present on the treatment plan sheet. The editor is accessed by choosing **Tools ▶ Maintenance ▶ Treatment options editor** from the main menu. It is divided into sections based on the species group so there is a section for avian, reptile, mammal, etc. This allows you to configure different options for each species group. This is important since it does not make sense to have "Feather check" on the treatment sheet for a turtle, for example. There are the following general categories: **Food**, **Fluids**, **Eyes**, **Ears** and **Miscellaneous**. Click on each section and choose the options you want. When you are done, press the **Ok** button. You must restart the program before any changes made here will take effect.

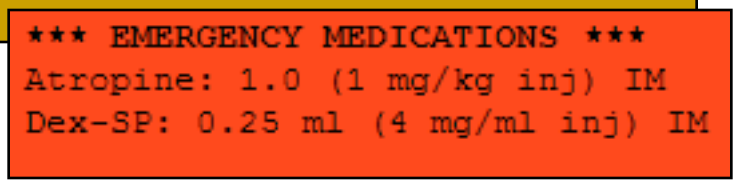


Medication editor

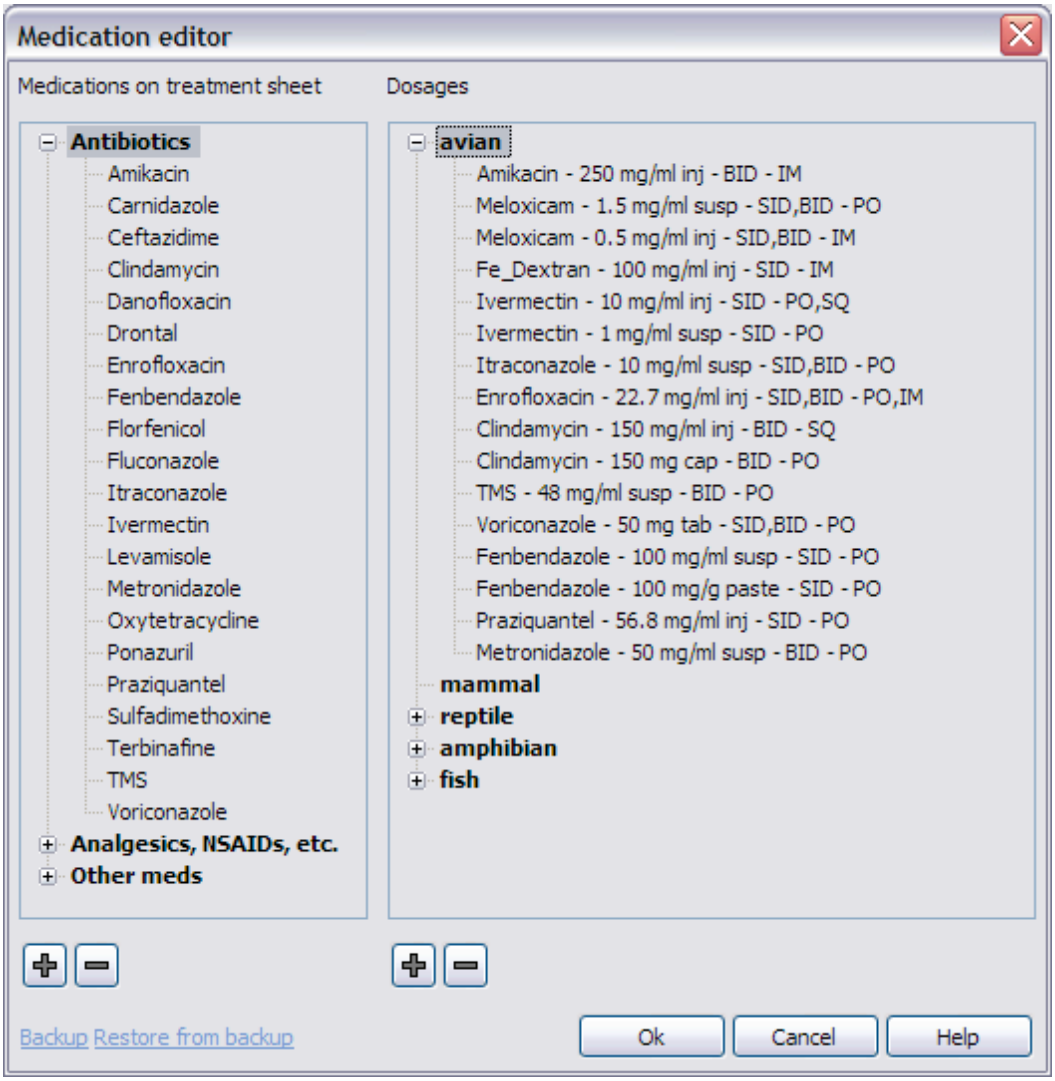
The medications listed on the individual treatment sheets can be configured using this tool that is accessed by choosing **Tools ▶ Maintenance ▶ Medication editor.** The following window will appear. It is divided into two main sections. The left side lists each medication and they are divided into the following main categories:

- Formula
- Fluids
- Antibiotics
- Analgesics, NSAIDs, etc.
- Other meds
- Vaccines
- Supplements
- Capture/restraint
- Emergency

After you add capture/restraint or emergency drugs to your formulary, go into an animal's treatment plan and select the emergency/capture drugs. The system will auto-calculate the proper doses based on the latest weight. Now, in an emergency, you can right-click on the animal on the main screen and choose **Show emergency/ captures doses** and a popup will display the doses.



The right side lists the dosage formulary for each drug and it is organized in a nested arrangement based on the species group. For example, avian:raptor is listed below avian. This means that you can have a separate formulary for avian:raptor vs avian:songbird.

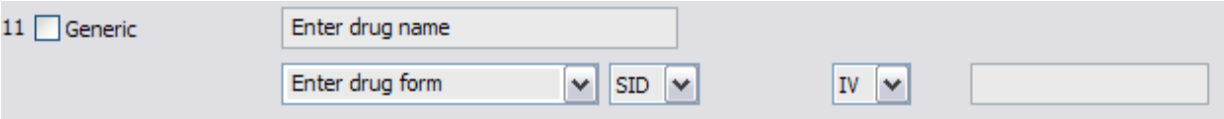


You can edit an existing **MEDICATION** by double-clicking any entry in the list on the **LEFT** side. You can add or remove the selected medication by pressing the **+** and **-** buttons. When adding a new medication it will be added to the category that is currently selected.

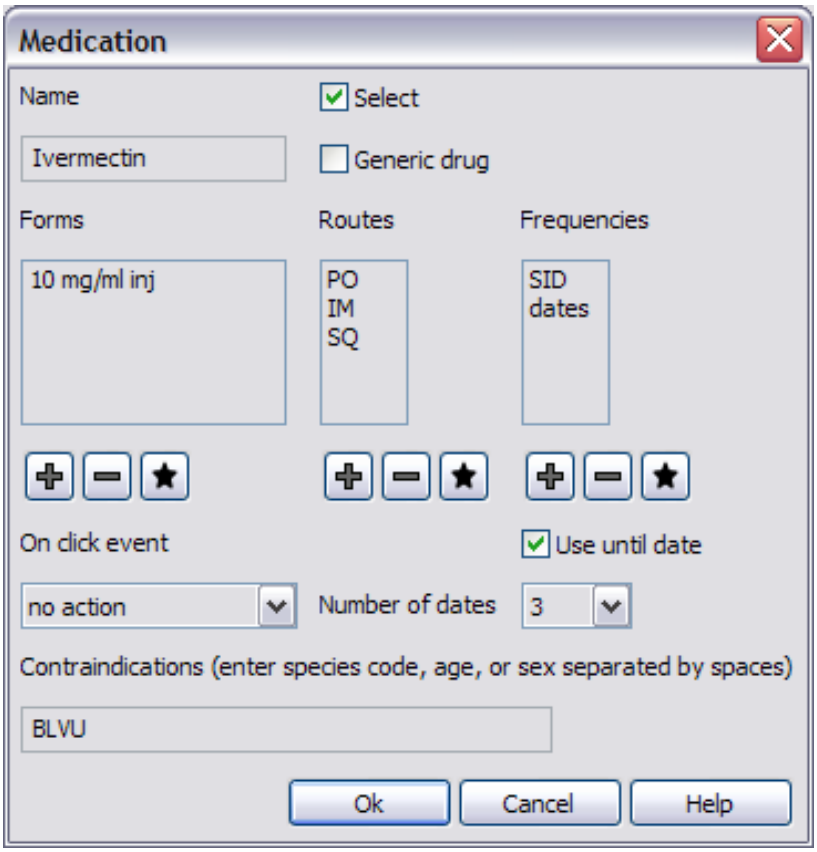
The **Medication Editor Form** is displayed when editing or adding a medication. The following fields are on this form:

- **Name** - the name that will appear on the treatment sheet. Note that spaces are not allowed. If you enter a space it will be replaced with an underscore.
- **Select** checkbox - check this box if you want this medication to be available on the treatment plan form.

- **Generic** checkbox - check this box to create a generic drug. A generic drug creates a placeholder in the treatment plan that allows you to enter a new drug that is not already programmed into the **Medication Editor**. It will display as shown here where you can manually enter a drug name and form, then choose a frequency and route. When creating a generic drug, it is usually best to select all frequencies and all forms as that will be the most flexible later when you go to use this drug. If you plan to use a drug repeatedly in the future, then it is best to make a normal, non-generic drug, entry.



- The **Controlled** drug checkbox - check this box to indicate that this drug is controlled and it's use will automatically be included in the **Controlled drug usage** report.
- The **Forms** list - specify any number of different drug forms/concentrations. Double-click on an entry to edit it. Press the **+** and **-** buttons to add and remove choices. Press the ***** button to mark the selected choice as the default. Note that if you add "**Dilution**" as a form, you will be able to use the **Dilution Calculator**.
- The **Routes** list - specify any number of different delivery routes. Press the **+** and **-** buttons to add and remove choices. Press the ***** button to mark the selected choice as the default.
- The **Frequencies** list - specify any number of different administration frequencies. Press the **+** and **-** buttons to add and remove choices. Press the ***** button to mark the selected choice as the default. Valid choices are **SID**, **BID**, **TID, QID, EOD, E3D,** as well as individual days of the week, **PRN** and **dates** where **dates** indicates that individual dates can be specified.
- **Use until date** checkbox - check this box if you want this medication to allow an Until date to be specified.
- **Number of dates** - specify the number of individual dates that can be entered. This is only relevant if you have selected "**dates**" as an option in the **Frequencies** list.



- **On click event** - allows you to specify an action that will occur when this medication is selected. The choices are:
  - **approvalRequired** - this will force the user to enter the initials of the person that has approved the use of this drug.
  - **fluids** - this will prompt the user to setup a fluid protocol and is typically used for nephrotoxic drugs.

The **Contraindications** field allows you to specify animals that this drug is contraindicated for use in. When the medication is selected on the treatment sheet for a contraindicated animal, the user will be prompted to make sure he or she wants to proceed. Note that the system will NOT prevent the use of a medication; it will only alert the user of the contraindication. Contraindications can be specified using either the species ABBREVIATION (not the common name), an age, or a sex.

You can edit an existing **DOSAGE** by double-clicking any entry in the list on the **RIGHT** side. You can add or remove the selected dosage by pressing the **+** and **-** buttons. When adding a new dosage it will be added to the species group that is currently selected or to the species group that contains the dosage that is currently selected.

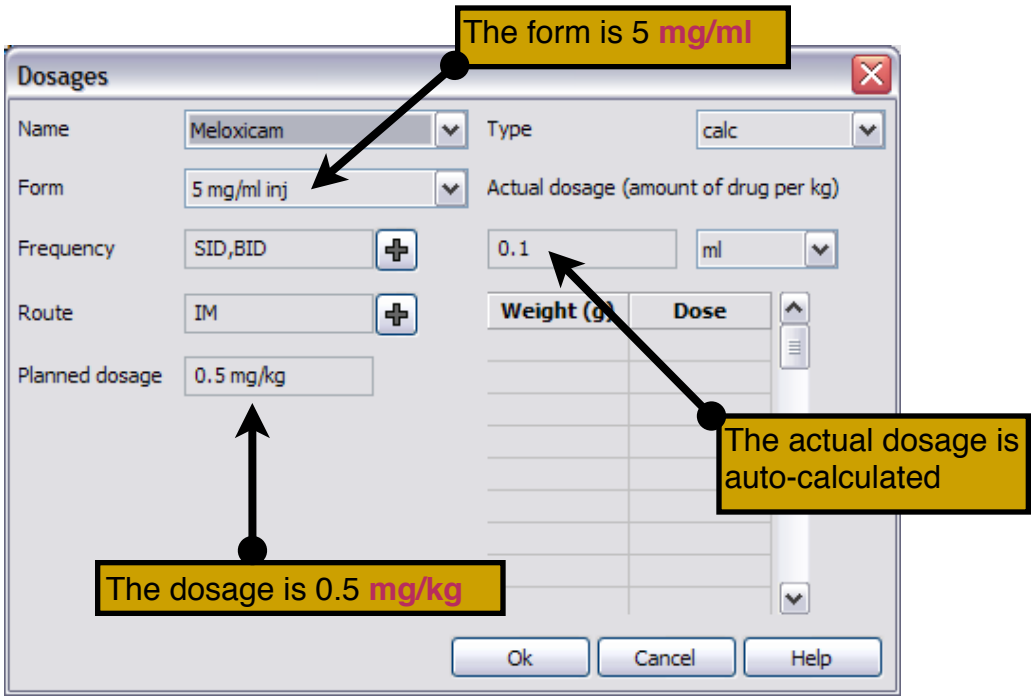
The **Dosage Editor Form** is displayed when editing or adding a dosage. The following fields are on this form:

- **Name** - Choose the name from the list. The names in this list must have already been setup as shown above in the medication list.
- **Form** - When you select a medication name, the list of available forms will be listed.
- **Frequency** - the dosage frequencies that this dosage applies to. You can list more than one separated by a comma. For example: SID, BID, TID
- **Route** - the dosage route that this dosage applies to. You can list more than one separated by a comma. For example: SQ, IM, IV
- **Planned dosage** - the intended dosage in mg/kg or ml/kg.
- **Type**
  - **calc** - This is used for liquid medications that can be dosed exactly by calculating the dose based on the animal's weight, the desired dosage and the concentration of the liquid. The dose is calculated by multiplying the animal's weight in kg by the **Planned dosage** and dividing by the **concentration**.

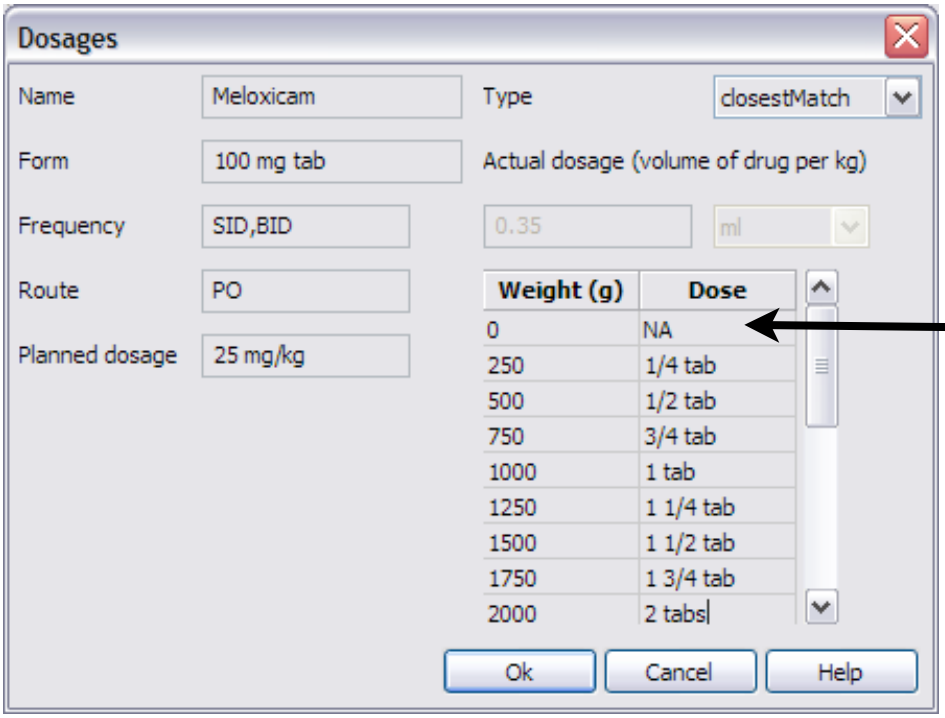
For liquids:
If the form in in **mg/ml** and the dosage is in **mg/kg**, then the **actual** dosage in **ml** will be auto-calculated for you.

If the **planned** dosage is in **ml/kg**, then that value will be used for the actual dosage.

For powders or pastes:
If the form in in **mg/g** and the dosage is in **mg/kg**, then the **actual** dosage in **grams** will be auto-calculated for you.



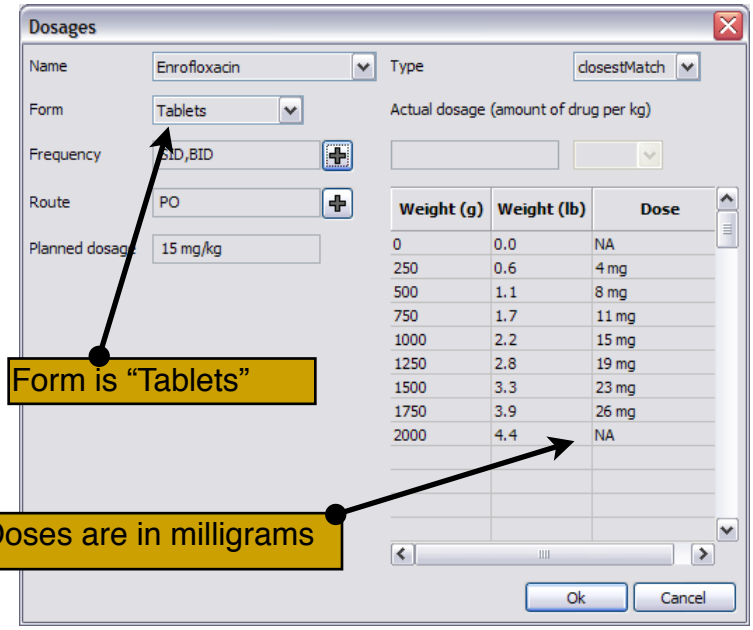
- **closestMatch** - This is used for tablets and capsules that cannot be divided easily. If this choice is selected, the **Actual dosage** fields are ignored. Instead a spreadsheet is used that allows you to specify a dose that most closely matches the animal's weight. So for example, you could specify that 250 g animal gets 1/4 tab, a 500 g animal gets 1/2 tab, etc. You can enter this information manually or you can right-click on the spreadsheet and choose **Calculate doses**. You will be prompted for a minimum weight, a weight increment and a maximum weight. You can enter the weights in grams or append lb, oz, kg to use other units. The program will then find the closest match of partial pills for each weight in the range. By default, the program will not attempt to use anything small than 1/4 of a tab or capsule as it is usually physically impossible to divide them smaller than that. You can make the weight increment between entries as small or as large as is needed for this particular medication. The following screenshot demonstrates a typical example.



Notice the Dose is **NA**. This is done so that you will be clearly alerted when there is no pre-determined dose for an animal on the low end of the weight range.

It is good practice, as is shown in this example, to include a dose of **NA** (not applicable) for a weight that is too small or too large to be effectively dosed by this medication form. If this is done, then the auto-calculator will display **NA** when this drug is selected and this will indicate to the user that another drug form should be used. In reality, this is a very common situation as tablets and capsules can typically only be divided into halves or quarters but rarely anything smaller.

In the above example, the **Form** was a tablet with specific strength in milligrams. If the medication comes in a variety of tablet sizes (for example: Enrofloxacin 22.7, 68 mg, etc), then you can specify the form simple as "**Tablets**". In this case, the auto calculator will output the **Dose** in milligrams instead of tablets or capsules. The user can then use the proper combination of sizes to match the desired dose.

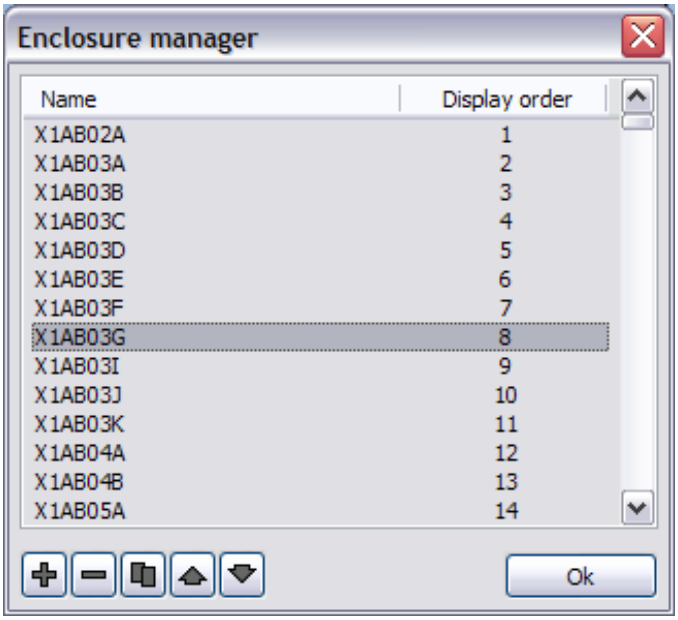


You can right-click on the dose spreadsheet to **Clear all doses** previously entered.

At any time, you can backup the medication formulary by pressing the **Backup** link. As the process of editing the formulary is somewhat detail-oriented, it is not a bad idea to perform a backup before making any edits. When you make a backup, the formulary is stored in a file that contains the date and time. If an error is made, you can easily restore a saved backup by pressing the **Restore** link. When restoring a formulary from a backup, you will be prompted to choose from a list of previously saved backups.

Enclosure editor

The enclosures can be configured using this tool. It is accessed by choosing **Tools ▶ Maintenance ▶ Enclosure editor.** A list of all currently defined enclosures is displayed. The **Display order** is also shown. This is the order that the enclosures are listed in the **Enclosure List** on the main screen. This is typically alphabetical, but they are be ordered in any manner that makes sense to your operation. The **Display order** for the selected enclosure can be changed by pressing the **Up** and **Down** arrows.

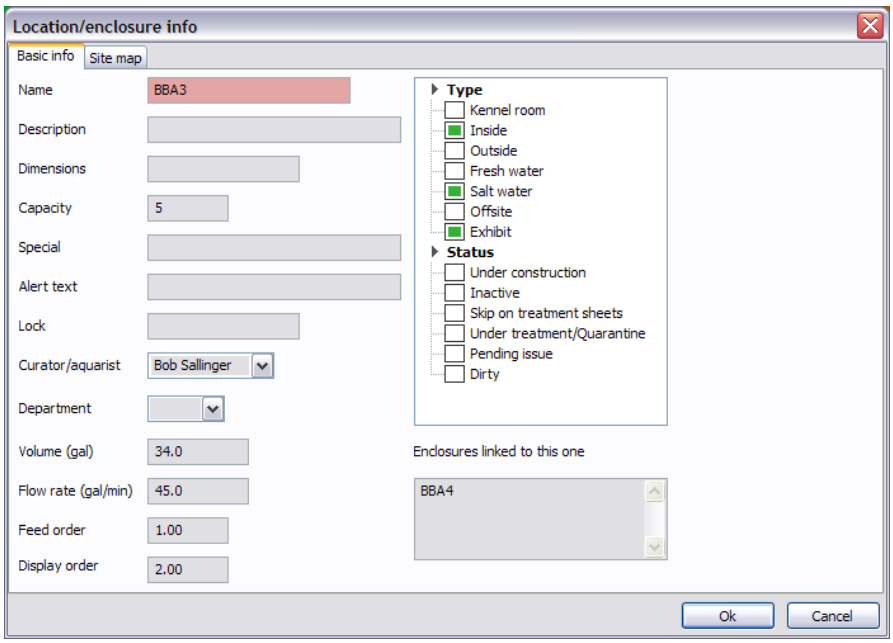


You can add a new enclosure or delete the selected one by pressing the **+** and **-** buttons, respectively. You can edit an enclosure by double-clicking on it and you can copy the selected enclosure by pressing the **Copy** button (the center button).

When creating a new enclosure or when copying or editing and existing enclosure, the Location/enclosure info form is displayed. The form has two tabs and it allows you to set many properties for each locations. This form can also be viewed by clicking on the **Enclosure Info** command from within an enclosure's **Enclosure Log**. The following fields can be set:

- **Name** - The name of the enclosure. This can be simply a number or a more descriptive name. Note that apostrophes are not allowed in the name.
- **Description** - A description of this enclosure. For information purposes only.
- **Dimensions** - The enclosure dimensions. This is displayed in the **Enclosure list** on the main screen and is for informational purposes only.
- **Capacity** - The enclosure capacity (i.e. the number of animals that can comfortably be houses in this location). This is displayed in the **Enclosure list** on the main screen and is for informational purposes only.

- **Special** - Any special notes about this enclosure. This is for informational purposes only.
- **Alert text** - This text will be printed on the daily treatment sheets and can be used as an alert or reminder about something specific about this cage. For example, you could say something like “Be careful with door latch” or “CAREFUL - AGGRESSIVE”.
- **Lock** - Indicates whether this enclosure has a lock. If you enter the lock information (such as the combination lock code), it will print out on the daily treatment sheets.
- **Curator** - The curator/aquarist is the person responsible for this enclosure. If enabled, the Enclosure List on the main screen can be filtered by this field.
- **Department** - This is the name of the section in your organization that this enclosure belongs to. If enabled, the Enclosure List on the main screen can be filtered by this field.



- There are also several check boxes that determine how this location is used and interpreted by **RaptorMed**.
  - **Kennel room** - This indicates this location is a room full of separate kennels or enclosures. If this box is checked, then each animal in this location will be treated as an individual. If this box is not checked, then all patients in this location will be treated as a group.
  - **Under construction** - If checked, this location will be highlighted in the **Enclosure** list and on the **Site Map**. This is for informational purposes only and the program does not prevent you from putting a patient in a location that is under construction.
  - **Inactive** - If this box is checked, this location will be removed from all lists and it cannot be selected or used for patients until unchecked.

- **Offsite** - These locations are for enclosures that are not on the premises and can be used for patients that are currently “on loan” to another organization or are otherwise offsite. Offsite locations are **not** included in the main **Enclosure list**.
- **Fresh water and Salt water** - Used to indicate that this enclosure is aquatic. Water quality data can be recorded for these enclosures. If both the **Fresh** and **Salt** water check boxes are checked, the system will assume the system is **Brackish**.
- **Inside and Outside** - These allow you to specify whether the enclosure is inside or outside. Depending on your configuration, this may determine where patients in these locations will appear on the daily treatment sheets.
- **On Exhibit** - This enclosure is on display and will be part of the **Exhibit census report**.
- **Under treatment** - This is used to indicate that a system is under treatment. This is very useful in aquarium situations where a tank of newly captured fish are being treated during a quarantine period. Enclosures in this situation are marked with a **red** dot in the center of their symbol in the **Site Viewer.** There will also be an **UNDER TREATMENT** text banner across the top of the Enclosure Log screen.

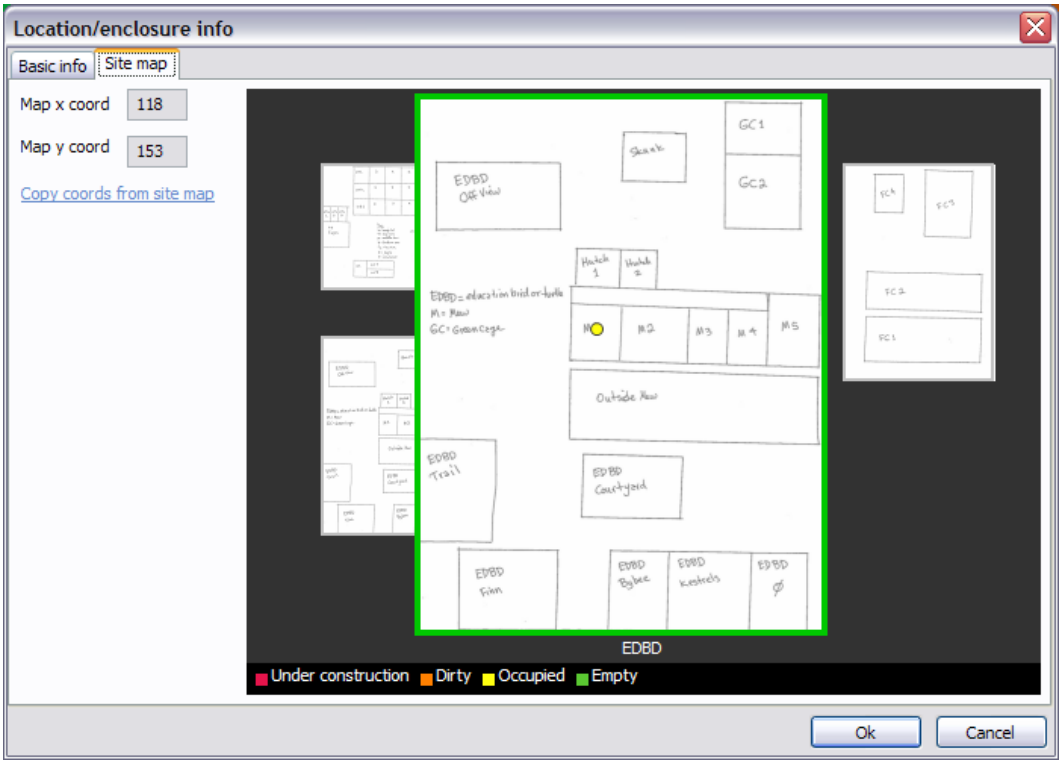
- **Pending issue** - The check box can be used to mark an enclosure as having an unresolved issue. This checkbox may be used in your daily treatment printouts.
- **Dirty** - This is used to indicate that an enclosure is dirty and should not be used. It will display as an **orange** dot on the **Site Viewer.**

- **Volume** - The volume of the tank. This is important for aquatic enclosures and is used to auto-calculate enclosure medication dosages.
- **Flow rate** - For aquatic enclosures. For informational purposes only.
- **Feed order** - This number indicates the order that this location will appear on the daily treatments sheets. Typically, it makes sense to set the feed order so that the order mimics the route that somebody would walk to visit each location. It is a decimal number so that you can add a new location between two existing ones easily. For example, if Cage 1 and Cage 2 have feed order 2.4 and 2.5 respectively, you can add a new location called Cage 1a with a feed order of 2.41.
- **Display order** - This number indicates the order that this location will appear in the **Enclosure list** on the main screen. Typically, it makes sense to set the display order so that each location is in alphabetic order. As with the **Feed order,** this

number is a decimal number so that you can easily insert a new location between two existing ones.

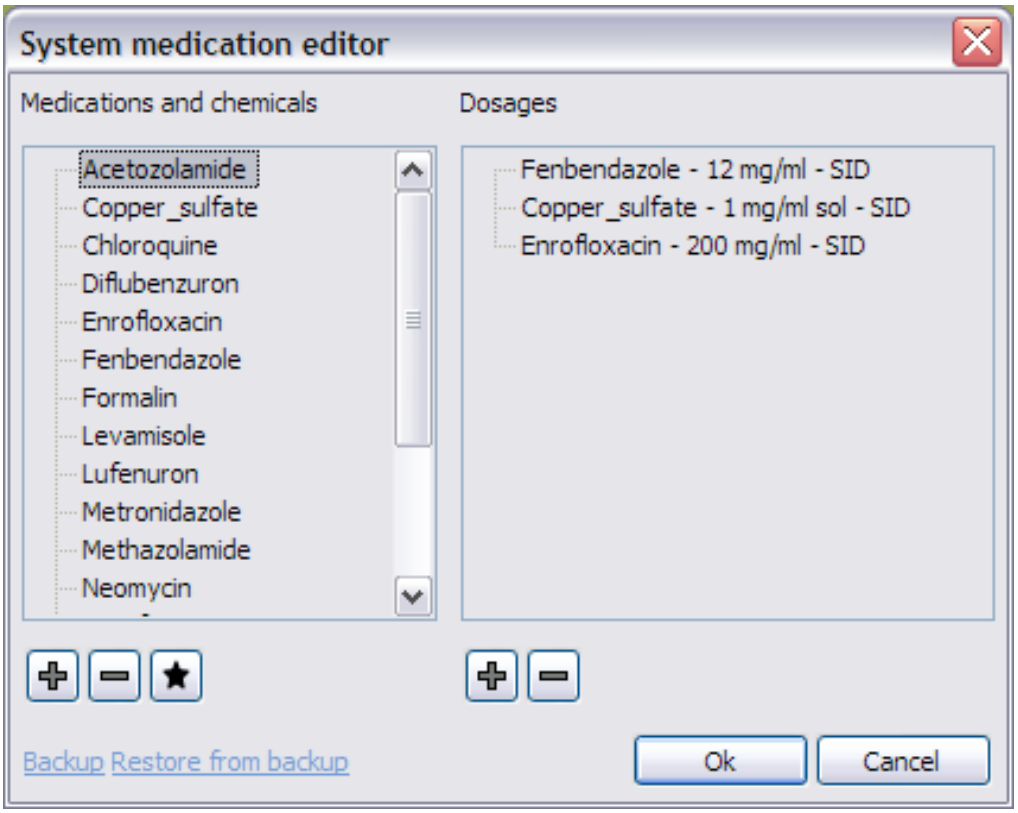
- **Enclosure linked to this one** - Enter the names of all enclosures that are linked to this one. Separate the names with a comma. See **Linked Enclosures** for more information.
- **X Coord** - This is the horizontal coordinate of the location on the **Site Map**. 0,0 is in the upper left corner.
- **Y Coord** - This is the vertical coordinate of the location on the **Site Map**. 0,0 is in the upper left corner.

To easily set the coordinates for a location, **Shift-left click** on a spot on the **Site Map**. A purple spot will be displayed. Shift-left click until the purple spot is in the correct location. Then press the "**Copy coords from site map**" link.



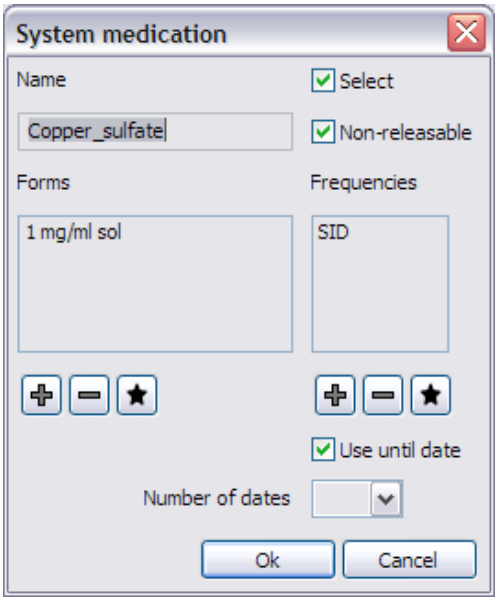
Enclosure medication editor
The medications listed on the enclosure treatment sheets can be configured using this tool. It is accessed by choosing **Tools ▶ Maintenance ▶ Enclosure/system medication editor.** The following window will appear. It is divided into two main sections. The left side lists each medication and the right side lists the dosages.

You can edit and existing **medication** by double-clicking any entry in the list on the **left** side. You can add or remove the selected medication by pressing the **+** and **-** buttons.



The medication editor form is displayed when editing or adding a medication. The following fields are on this form:

- **Name** - the name that will appear on the treatment sheet. Note that spaces are not allowed. If you enter a space it will be replaced with an underscore.
- **Select** checkbox - check this box if you want this medication to be available on the treatment plan form.
- **Non-releasable** checkbox - check this box if this is a drug that should result in any animals being marked as non-releasable after being treated with this drug.

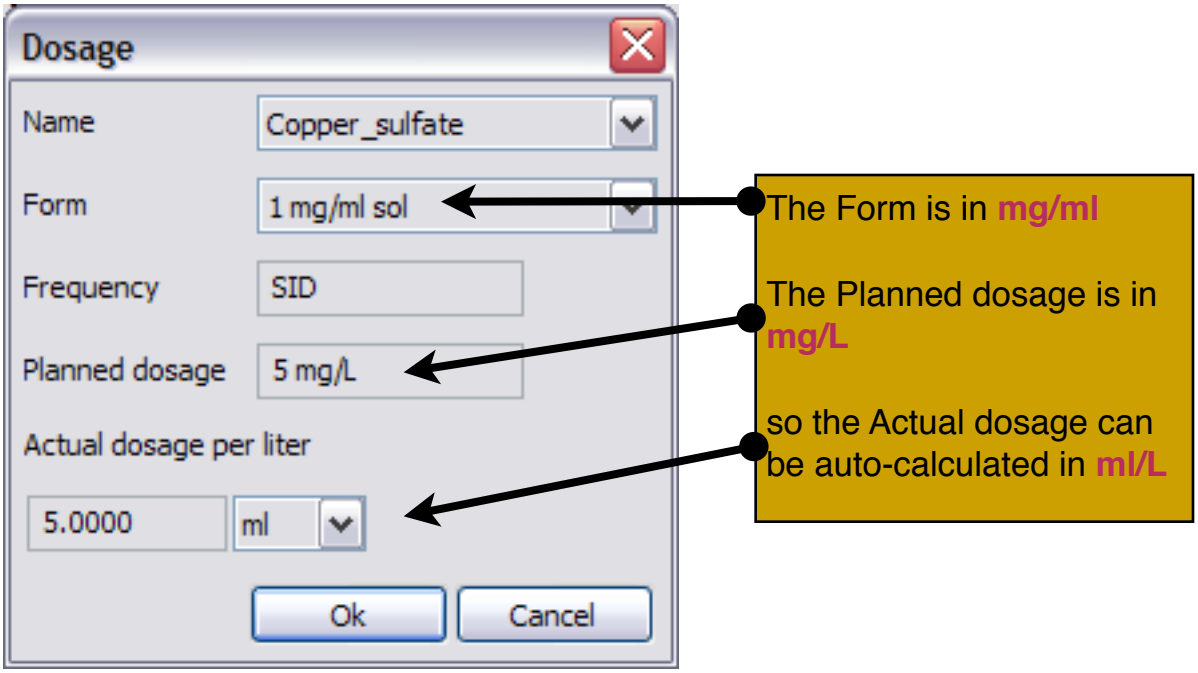


- The **Forms** list - specify any number of different drug forms/concentrations. Double-click on an entry to edit it. Press the **+** and **-** buttons to add and remove choices. Press the ***** button to mark the selected choice as the default.
- The **Frequencies** list - specify any number of different delivery frequencies. Press the **+** and **-** buttons to add and remove choices. Press the ***** button to mark the selected choice as the default. Valid choices are **SID**, **BID**, **TID** and **dates** where **dates** indicates that individual dates can be specified.
- **Use until date** checkbox - check this box if you want this medication to allow an Until date to be specified.
- **Number of dates** - specify the number of individual dates that can be entered. This is only relevant if you have selected "**dates**" as an option in the **Frequencies** list.

You can edit and existing **dosage** by double-clicking any entry in the list on the **right** side. You can add or remove the selected dosage by pressing the **+** and **-** buttons.

The dosage editor form is displayed when editing or adding a dosage. The following fields are on this form:

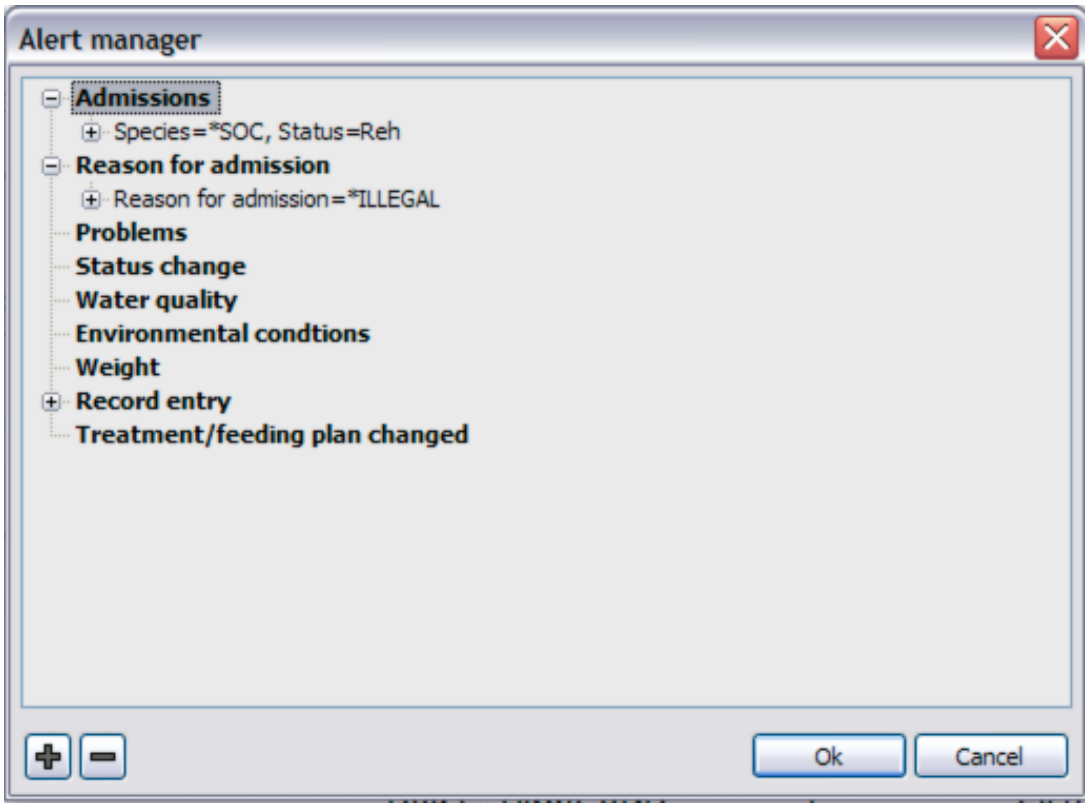
- **Name** - The name of the medication is chosen from the list
- **Form** - This list is filled with available choices when a medication is chosen from the above list.
- **Frequency** - the dosage frequencies that this dosage applies to. You can list more than one separated by a comma. For example: SID, BID, TID.
- **Planned dosage** - the intended dosage in **mg/L**. If the **Form** is specified in a **mg/ml** format and the **Planned dosage** is provided in **mg/L** format then the **Actual dosage** will be auto-calculated in a **ml/L** format.
- **Actual dosage** - Specify the amount here. The volume units for the dose and the units for the destination aquarium must be specified are you can have the system auto-calculate the value for you as described above.



At any time, you can backup the medication formulary by pressing the **Backup** link. As the process of editing the formulary is somewhat detail-oriented, it is not a bad idea to perform a backup before making any edits. When you make a backup, the formulary is stored in a file that contains the date and time. If an error is made, you can easily restore a saved backup by pressing the **Restore** link. When restoring a formulary from a backup, you will be prompted to choose from a list of previously saved backups.

Alert editor

The **Alert Editor** allows you to program in various situation for which system-wide alerts can be automatically generated. It is accessed by choosing **Tools ▶ Maintenance ▶ Alerts editor** from the main menu.



The editor screen has several different categories for alerts:

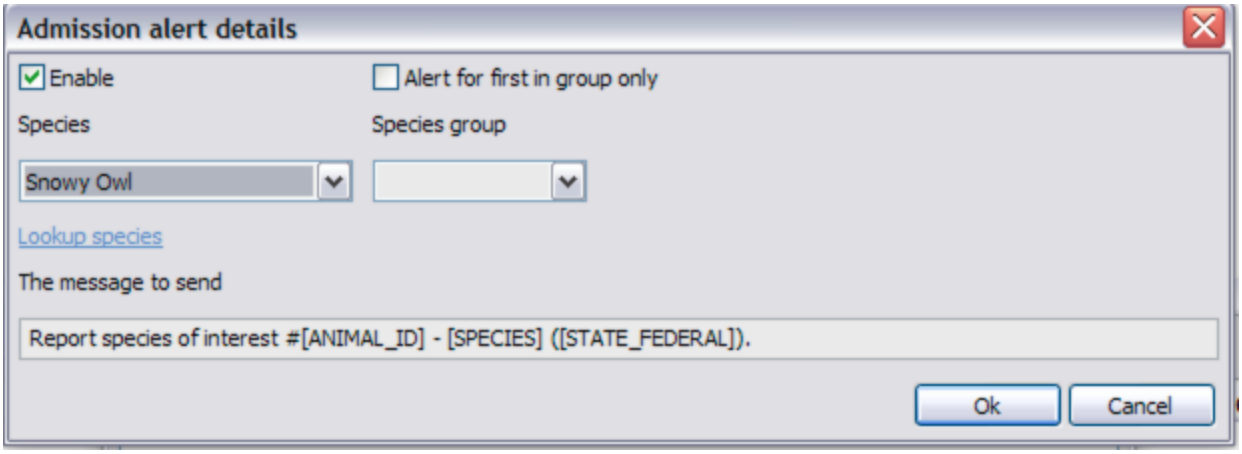
- **Admissions** - these alerts are generated when an animal of a specific species or species group is admitted.
- **Reason for admission** - these alerts are generated when an animal is admitted due to a specific cause. The species and/or species group can also be specified.
- **Problems** - these alerts are generated when a specific problem is added to an animal's problem list. The species and/or species group can also be specified.
- **Status change** - these alerts are generated when a specific status/disposition is selected for an animal. The species and/or species group can also be specified.
- **Water quality** - these alerts are generated when a specific water quality measurement is out of range. The enclosure, curator and/or department can also be specified. Of course, these alerts can only be triggered if normal range values have been established for the various measurements.
- **Environmental conditions** - these alerts are generated when a specific environmental condition measurement is out of range. The enclosure, curator and/or department can also be specified. As with water quality, these alerts can only be triggered if normal range values have been established for the various measurements.
- **Weight** - these alerts are generated when an animal's weight is out of range. You can specify a specific animal's id number or all animals of specific disposition (i.e. all permanent residents). The enclosure, curator and/or department can also be specified.

- **Record entry** - These alerts are generated when a record entry is added to an animal's chart. You can specify a specific animal's id, a species or a species group. You can also specify which record entry types (such as a CBC, flight evaluation, etc) or a specific type of attachment (radiograph, photograph, etc) you are interested in. In addition, you can specify whether to alert only when a record is ***updated*** (rather than when it was initially created).
- **Treatment/feeding plan changed** - These alerts are generated when an animal's treatment plan is changed. You can specify a specific animal's id number or all animals of specific disposition (i.e. all permanent residents). The enclosure, curator and/or department as well as the person making the change can also be specified.

To add a new alert, select the main category you want then press the **+** button. To edit an alert, simply double-click on it. To delete an alert, select it an press the **-** button.

Each alert type has a specific edit form with the appropriate fields. Each alert must be enabled by checking the **Enable** check box. Each alert will generate a custom message. A default message is provided in **The message to send** field. The message may contain macros which are enclosed in square brackets as in:

```
The treatment/feeding plan for [NAME]/#[ANIMAL_ID] has been changed
```



The macro text will be automatically replaced with data relevant to the alert that is being generated. Here is a list of available macros. Note that some macros will not make sense in some instances. For example, [PARAMETER] doesn't make sense for a Admission alert.

- [ANIMAL_ID] - the animal's identification number
- [SPECIES] - the animals's species
- [STATE_FEDERAL] - this indicates whether the specified species is a species of concern at the state and/or federal level.

- [ENCLOSURE] - the name of the enclosure
- [PARAMETER] - the name of the water quality or environmental condition
- [VALUE] - the value of the water quality or environmental condition
- [NAME] - the animal's name
- [REASON_FOR_ADMISSION] - the reason for admission
- [STATUS] - the animal's status/disposition
- [ENTRY_TYPE] - the type of the new record entry
- [TODAY] - today's date
- [PROBLEM] - the newly added problem.

When an alert is created, **all** the criteria that are specified must be met for the alert to trigger. So if you choose "Red-tailed hawk" and "Electrocution" for a **Reason for admission** alert, the alert will only be triggered if both of those criteria are met.

Some of the lists have special values. For the species lists, there are a few choices that represent a whole group of species:

`*SOC` - this represents all species listed as a species of concern in the Species Editor.

`*RVS` - this represents all species listed as a rabies vector n the Species Editor.

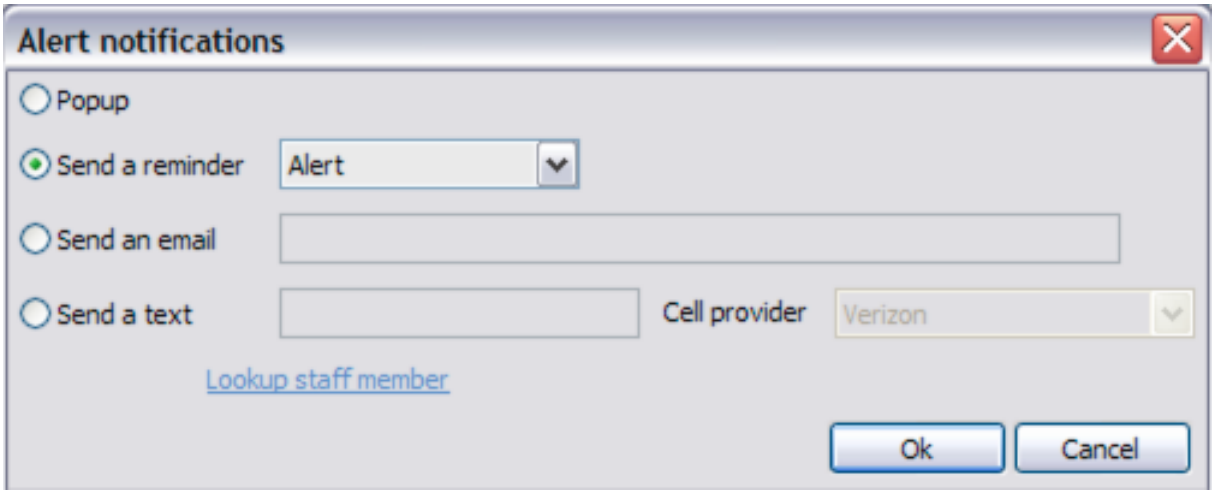
`*HMS` - this represents all species listed as a highly migratory species in the Species Editor.

The **Reason for admission** list has `*ILLEGAL` as a choice. This represents all causees of admission that are considered an illegal cause.

Many alerts have an option to **Alert for first in group only**. This option is used so that a series of alerts are not issued in a case where a group of animals is admitted at once. If this option is checked, then an alert will only be triggered for the first animal.

Once an alert is created, you need to specify ***how*** the alert should be triggered. There are four options:

- Popup message - A popup will appear immediately on screen.
- Send a reminder - A reminder will be sent with the specified **Category**. Any one subscribed to this Category or alerts will see this message immediately in their **Alert Window** on the main screen.
- Send an email
- Send a text message - you will need to provide the cell phone number and choose the service provider from the list.



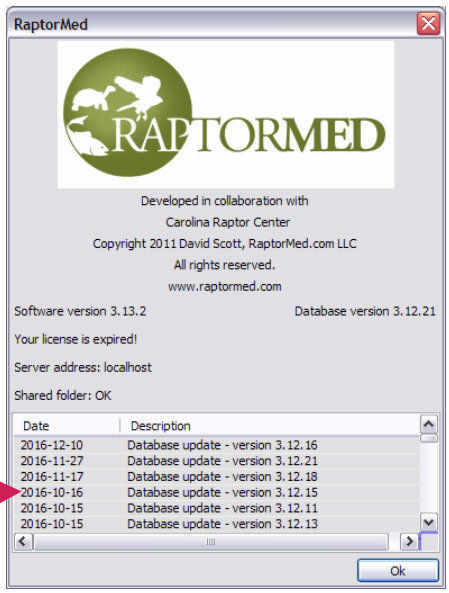
To pick an option, select the alert then press the **+** button. To edit an option, simply double-click on it. To delete an option, select it an press the **-** button. Note that you can choose more than one option so the alert could popup on screen and send a text message.

Once you have finished editing the alerts, you must restart **RaptorMed** for the changes to take place.

Open shared folder
This function will open the Windows File Manager in the RaptorMed shared folder. This is simply a convenience function and is useful when doing maintenance or debugging issues.

Licensing and system information

RaptorMed requires an active license in order to run. The license is renewed on a periodic basis as determined by the purchase agreement. The current license expiration date is shown in the **About** box that is displayed when you select **Help ▶ About** from the main menu.



In addition, this window displays the network IP address or hostname of the **RaptorMed** server and the status of the **RaptorMed** shared folder resource. These can be helpful when debugging problems that you may encounter.

The list at the bottom is a maintenance log that displays information about events such as database backups, additions of new users and when animal records are deleted.

You can also go to **Help ▶ View change log** from the main menu to view a list of each change made in each version of the program.