Amphibians

Species Information Sheet

Natural History / Behaviour

- Frogs have very sensitive skin: always wear moistened, powder-free, disposable gloves when handling
- Frogs are ectothermic; their body temperature is influenced by their surroundings
- Some species secrete toxin from skin (i.e. cane toads)
- Frogs should never be relocated due to the risk of disease (e.g. Chytridiomycosis) being spread
- Information on Chytridiomycosis amphibian fungus can be found on the Australian Government Department of Agriculture, Water and the Environment website – www.environment.gov.au. Refer to the information sheet attached.

Some Common Species of South-east Queensland

Green Treefrog	*Litoria caerulea*	> 100 mm
Red-eyed Green Treefrog	*Litoria chloris*	> 55 mm
Graceful Treefrog	*Litoria gracilenta*	> 35 mm
Eastern Sedgefrog	*Litoria fallax*	> 25 mm
Red Tree frog	*Litoria rubella*	> 30 mm
Emerald-spotted or Peron's Treefrog	*Litoria peronii*	> 65 mm
Striped Marsh frog	*Limnodynastes peronii*	> 65 mm
Spotted Grass or Marsh frog	*Limnodynastes tasmaniensis*	> 40 mm
Tusked Frog	*Adelotus brevis*	> 30 mm
Scarlet-sided Pobblebonk or Northern Banjo frog	*Limnodynastes terraereginae*	> 65 mm

Note: List is incomplete. For a complete list of all frog species found in South-east Queensland, refer to a frog field guide such as *Field Guide to the Frogs of Queensland* by Eric Vanderduys.

Basic Rescue Equipment and Emergency Housing

- Plastic terrarium with ventilated lid **or**
- Clean plastic ice-cream container (or similar) with holes in lid for ventilation
- Damp paper towels on base of container (do not fill with water)
- Clean plastic plant pot or broad-leaf plant leaves to provide cover

OHS Considerations / Zoonoses

Beware of

- Slippery!
- Toxicity of cane toads (glands on back of neck)

Known Zoonotic Diseases

- Amphibians known to carry salmonella – ensure excellent hygiene when handling
- No other specific zoonoses

Handling

Always wear moistened, powder-free, disposable gloves when handling frogs. Use tank water only (or cooled pre-boiled water) as they absorb everything through their skin.

Keep handling to an absolute minimum.

Place one hand around the pectoral girdle behind the front limbs and the other beneath the hind limbs. Restrain the frog by enclosing it in your grasp without squeezing.

For larger frogs and for a more secure grip, you can use the thigh holding method where you grasp just above the knee joint and gently pull the limbs back. Do not attempt this technique if there are injuries to the hind legs.

Photos: CWS

Assessment Checklist – Frogs

Clinical Signs	Healthy / Normal	Sick / Injured
Demeanor	• Bright and alert • Will struggle when being handled • Eyes open	• Quiet / depressed • Distressed • Non-responsive when handled • Unconscious *(Indicative of shock, dehydration, injury)*
Mobility / Limbs	• Able to move body and all limbs • No swelling • No obvious abnormalities or lack of symmetry	• Abnormalities in movement (e.g. only using front legs, dragging a limb, unable to right itself) • Paralysis *(trauma)* *(Indicative of trauma related injury)*
Body Condition and skin	• Good body condition • Good muscle tone • Skin is shiny and undamaged • Non-odorous smell	• Open wounds *(trauma)* • Puncture wounds *(trauma)* • Scratches *(trauma)* • Poor body condition *(malnourished)* • Lack of muscle tone • Offensive odour *(chronic disease or old wounds)* • Dull skin *(dehydrated)*
Breathing	• Normal – Slight movement of chest and throat with each breath – no noticeable effort. (Note: handling may result in increased respiration rate)	• Open-mouthed breathing • Labored (noticeable effort to breath) • Audible breathing sounds (clicking, ticking, gurgling sounds) *(Indicative of trauma related injury, poisoning)*
Head	• Symmetrical	• Abnormal symmetry • Indentations • Swelling • Lacerations/abrasions *(Indicative of trauma related injury)*
Eyes	• Bright and clear • Shiny • Open	• Dull (pain/dehydration) • Sunken (*dehydrated*) • Closed (pain/dehydration) • Protrusion *(trauma)* • Swelling *(trauma)* • Nystagmus *(head trauma)* • Unequal pupil(s) *(trauma)* • Unreactive pupil(s) *(trauma)* • *Purulent* discharge *(infection)* Missing (trauma)
Nose	• Straight • No discharge or bleeding	• Distorted (*trauma - fracture*) • Blood or other discharge (purulent infection) from nostrils (*trauma*) • Abrasions (*trauma*) • Swelling (*trauma*)

Assessment Checklist – Frogs (continued)

Clinical Signs	Healthy / Normal	Sick / Injured
Mouth	• No discharge • Symmetrical • Tongue undamaged • Closed	• Mal-aligned jaw (*trauma*) • Blood (*trauma*) • Swelling (*trauma*) • Crepitation (*trauma)*
Ears (Tympanic membrane)	• No discharge • Clear intact window over the ear	• Blood • Clear fluid • Tear in ear covering *(Indicative of trauma related injury)*
Cloaca (vent)	• Clean • Free from discharge • No protrusions	• Blood • Lacerations • Swelling • Cloacal prolapse *(trauma)* *(Indicative of trauma related injury)*

Assessment Parameters

Vital Signs

Heart Rate	Variable
Respiration Rate	Variable
Core Body Temperature	Variable

Preferred Ambient Temperature

15°C – 20°C and moist/humid atmosphere

Signs of Stress

- Constantly trying to escape
- Urination, defecation when handled
- Hyperventilation
- Vocalising when picked up

Signs of Pain

- Non-responsive
- Closed eyes
- Vocalization
- Not seeking cover
- Not moving from or to heat source
- Colour change (e.g. green tree frogs become darker)

Signs of Dehydration

- Dry skin
- Dull eyes
- Sunken eyes
- Lack of skin elasticity
- Lethargy
- Excessive sloughing of skin

Assessment of Body Condition

Look for good coverage of muscle over backbone.
Pelvic bone – should not be protruding
Full rounded abdomen

Emergency Diet

Do not offer any food or water to an animal suffering from injury (e.g. vehicle hit, dog/cat encounter). Injured wildlife must be presented to a veterinarian for treatment before offering food or water. Alternatively, please consult with your relevant Species Coordinator.

Adults

- **Invertebrates** (e.g. crickets, meal worms, wood cockroaches, grasshoppers)
- **Fresh water** in a shallow dish to soak in

Note: Do not offer food until instructed by the Reptile Coordinator.
Frogs can go for 24-48 hours without food if in good body condition and well hydrated.

Common Injuries, Diseases and Conditions

Adults

- **Trauma related injuries** (head injury, fractured limbs, eye injuries)
- **Dog or cat attack** (puncture wounds, open wounds, evisceration, internal injuries)

Photos: Karen Scott

Drug Administration (preferred routes)

Oral	Not suitable
Intramuscular	Muscle in upper hind leg
Subcutaneous	Over the mid-region
Absorption	Some medications can be administered by topically

Euthanasia (preferred methods)

Euthanasia methods stated to assist veterinary staff.
Wildlife volunteers must not euthanise unless trained to do so or they hold appropriate approvals.

- Injection of sodium pentobarbitone (Lethabarb) after induction with Isoflurane or Alfaxan CD RTU preferred):
  - Intracardiac (must be anaesthetised first)
  - Intraperitoneal (dilute with water 50:50)
- Blunt force trauma to the head (small frogs only) – **only if trained to do so**
- **Euthanasia by placing directly in freezer is NOT ACCEPTABLE and is INHUMANE.**

Suggested Drugs and Dose Rates

This information is provided for **VETERINARY USE ONLY** to assist veterinary staff with the **initial assessment** and **emergency treatment** of sick, injured and orphaned wildlife. Suggested drugs and doses are those commonly used by the wildlife hospitals in South-east Queensland and are for routine treatment only. Recommendations may vary between individual veterinarians. Culture and sensitivity results would indicate the most appropriate antibiotic regime. Most drugs are used off-label.

Anaesthetic

Drug	Composition	Dose Rates
Isoflurane ®	Isoflurane 100%	5% for induction and 2-3% for maintenance with oxygen flow rate of 1-2 litres per minute. Induction time varies up to 5-10 minutes (they often regurgitate when anaesthetised). Isoflurane can be administered topically mixed with K-Y gel (1-3mL of liquid Iso, 1-1.5mL water and 3-3.5 mL K-Y gel administered at 0.025-0.035 mL/g body weight on ventral surface Can also be administered by soaking a cotton ball in Isoflurane and placing it in a perforated vial. Put vial in a sealed container with the frog.
Alfaxan CD RTU ®	Alphaxalone	10mg/kg (IV) 15-20mg/kg (IM or IC)
Ketamine	Ketamine	30-50mg/kg IC

Analgesic

Drug	Composition	Dose Rates
Torbugesic ®	Butorphanol Tartrate	1-2 mg/kg SID to BID SC or IM
Metacam ®	Meloxicam	0.4mg/kg EOD SC or IM

Antibiotics

Drug	Composition	Dose Rates
Baytril ®	Enrofloxacin	5-10 mg/kg EOD (IM, SC or topically – must be diluted at least 50:50 with sterile water)

Anatomy

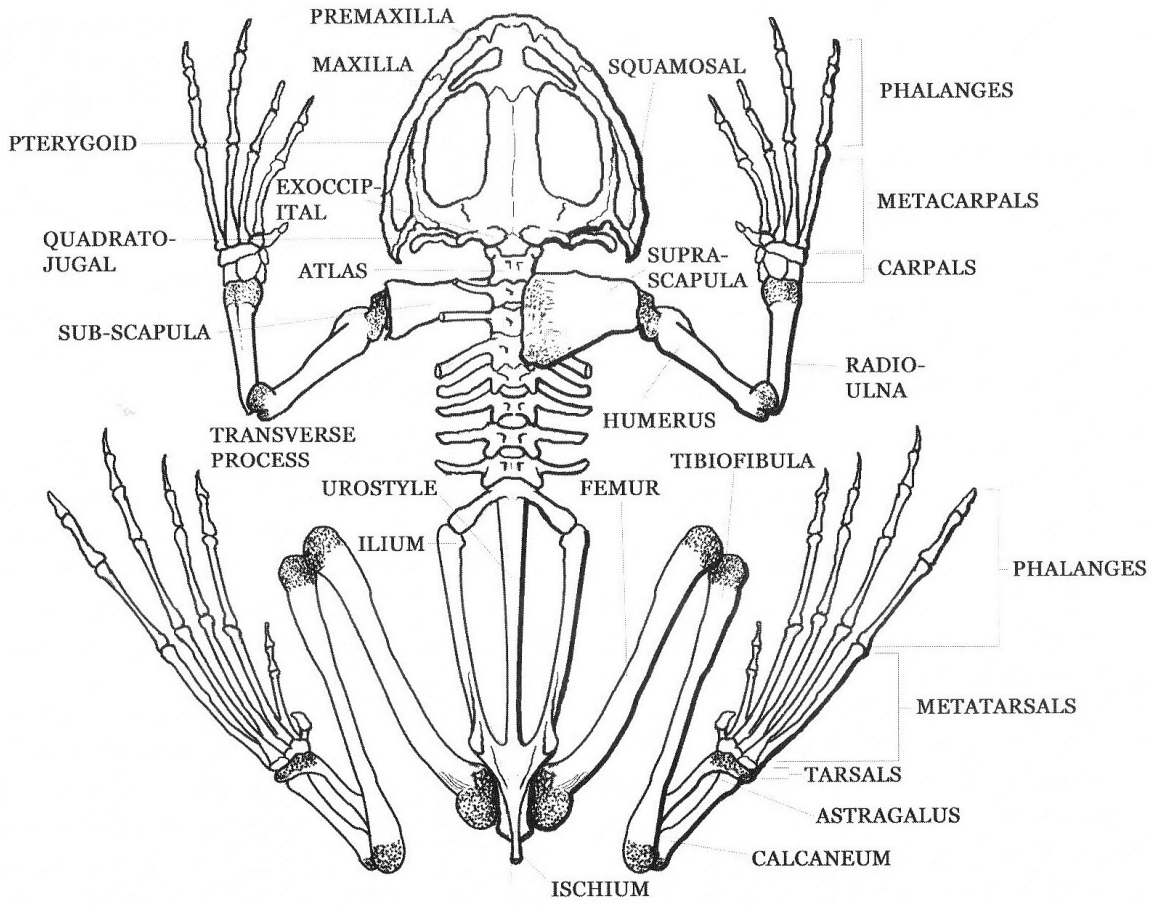

Diagram above: Skeletal anatomy

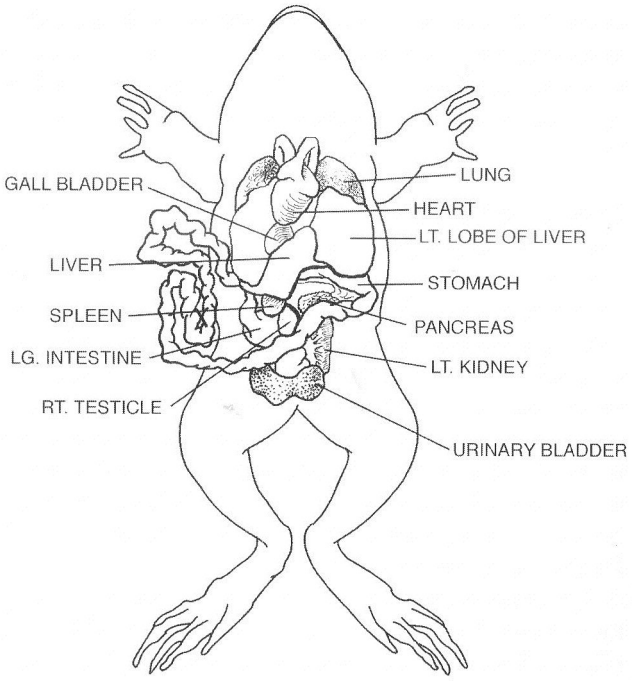

Diagram Right: Visceral anatomy

Source: *Exotic Animal Medicine for the Veterinary Technician* (Ballard & Cheek)