

Wallum sedgefrog

Litoria olongburensis

Vulnerable (*Nature Conservation Act 1992*) |
Ecological Sciences, Queensland Herbarium

Identification

A small, slender-bodied frog with a sharp projecting snout and narrow head. Snout-vent length (SVL) is approximately 25 mm for males and 27-31 mm for females (Barker et al. 1995; Meyer 2012).

Dorsal surface is light grey-brown, bright green, sometimes with dark spots. A white stripe, extends from below the eye, over the shoulder and breaks up into a series of thick, globular spots. A dark brown stripe runs between the snout and the eye, and through the tympanum.

The dorsum is smooth and granular on the ventral surface. Ventral surface is white while the throat is peppered with brown. Colouration in the hidden parts of the thigh is blue to purple-blue, and often the groin has some blue colouration. The fingers have basal webbing and the toes are partly webbed (Robinson 1993; Barker et al. 1995; Cogger 2000; Meyer et al. 2006).

Litoria olongburensis may be confused with eastern sedgefrog *L. fallax* and Cooloola sedgefrog *L. cooloolensis*. It can be distinguished from these two closely-related species by the long, pointed snout, and by the blue colouration in the posterior thigh and groin (Barker et al. 1995).

Tadpoles

Total length is up to approximately 40 mm (Meyer 2012).

Deep-bodied and dorsum colouration is a uniform dark purple-brown, or dark grey, sometimes with darker mottling. Snout is angular in profile and the prominent eyes are lateral.

The ventral surface is opaque silver-white, with a rolling blue sheen over sides of body and runs halfway along the tail, best seen in sunlight and out of water. Tail musculature is moderate and heavily mottled with dark purple-brown or grey and sometimes orange. The tail also ends in a flagellum (long, flexible tip of tail) which usually has dark pigmentation (Anstis 2002; Meyer et al. 2006).

Call

Described as a soft 'wzzzzrt' or 'buzzing' call (Barker et al. 1995; Meyer 2012).



Photo by Jesse Rowland

Distribution

Confined to the coastal lowlands and sand islands of south-east Queensland and New South Wales. Occurs from Fraser Island (Queensland), south to Woolgoolga (New South Wales) (Hines et al. 1999; Meyer et al. 2006).

In Queensland, significant populations of *L. olongburensis* are known from Great Sandy and Moreton Island National Parks, Bribie Island and North Stradbroke Island (Hines et al. 1999; Meyer et al. 2006; Hines and Meyer 2011).

Habitat

Litoria olongburensis inhabits coastal ephemeral and semi-permanent swamps (pH < 5.5) with sedges, emergent reeds and/or ferns.

The species can also be found around freshwater lakes and drainage lines on sandy, low nutrient soils in coastal wallum (Barker et al. 1995; Anstis 2002; Lewis and Goldingay 2005; Meyer et al. 2006; Meyer 2012).

In addition, animals have been recorded a considerable distance from water in eucalypt forest, near wallum habitat (DSEWPaC 2011).

Seasonal and timing considerations

The optimal conditions to survey for *L. olongburensis* is at any time of the year after rainfall, and up to two months after suitable habitat has been inundated with water, when juveniles are likely to be active and abundant.

Conducting surveys after sunset and during windless nights when relative humidity is high, will also increase the likelihood of detecting *L. olongburensis* (DSEWPaC 2011).

Thorough visual surveys should avoid heavy rainfall periods when animals are likely to be less detectable (H. Hines pers. comm. 2012).

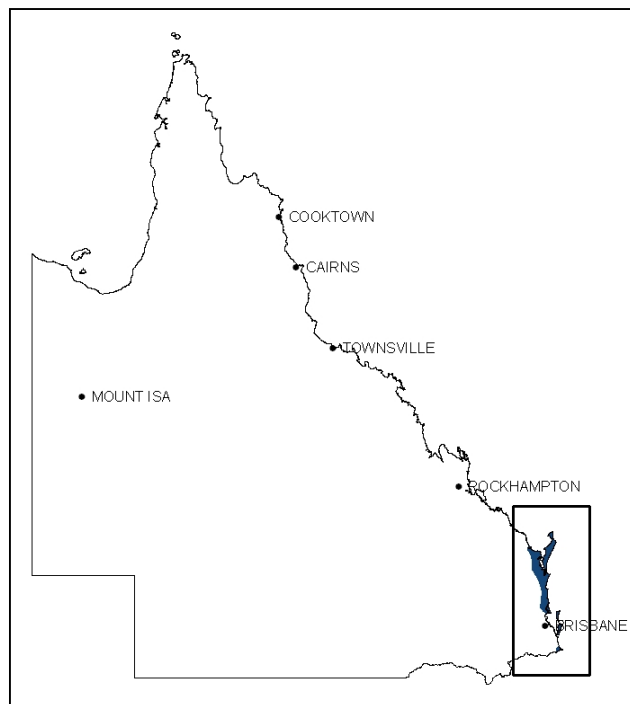
Recommended survey approach

A combination of the following survey methods is recommended:

Thorough visual survey

This survey technique involves observer/s walking through suitable wallum habitat systematically searching and listening (calling adult males) for frogs and tadpoles. Length of transect, weather conditions and time spent conducting the survey should be recorded.

Thorough searches targeting *L. olongburensis* should focus on shelter sites such as sedges, reeds and ferns (Meyer et al. 2006). Tadpoles may be found in water bodies which contain the shelter sites mentioned above. The most effective way to capture tadpoles is with a dip net. For identification purposes, tadpoles can be held in a sealable plastic bag filled with water from where it was captured (Meyer et al. 2001).



*Note: tadpoles can be very difficult to identify to species-level and usually require highly specialised skills for positive identification, or housing tadpoles for a period of time to allow them to metamorphose into adult frogs, under the appropriate state government permits.

Acoustic recorders

Acoustic recorders can be left to record all calling male frogs heard from one vantage point for a period of time.

Recorders should be deployed immediately after rainfall (if possible) and left to record for two weeks to a few months, preferably in the vicinity of receding waterbodies. Analysis of calls (post-recording) to detect presence of the species should target periods (day or night) when frogs are most likely to be calling (e.g. after rainfall periods).

Survey effort guide

Although there is currently no published information on detection probabilities for *L. olongburensis*, the recommended effort below, when implemented in appropriate habitat, weather conditions and season(s), should provide a high likelihood of detecting *L. olongburensis*. If suitable habitat is limited within the project area, transects should be repeated multiple times over the same section(s) of breeding habitat.

Minimum effort within suitable breeding habitat during optimal conditions			
Survey technique	Effort per survey period	Effort per survey	Number of survey periods
Thorough visual survey	One 50 m transect per 10 ha or if ≤ 10 ha 2 transects; at least 30 minutes per 50 m	Spread over 2 or more nights	3 surveys
Acoustic recorders	2 recorders per ha (or 50 m)	2 weeks	1 survey

Ethical and handling considerations

- Minimise habitat disturbance at breeding sites. If transects are established in wet wallum habitat, take care not to deviate from transects at any time.
- Avoid chemical contact with the environment and animals while handling (e.g. insect repellent).
- Strict hygiene protocols should be implemented to minimise disease and pathogen (e.g. chytrid fungus) spread (for further information see www.ehp.qld.gov.au).
- Avoid prolonged exposure of animals to the spotlight beam. For longer observation periods, dim the light or use an infrared beam or a red filter.
- Avoid handling individuals as it may affect their behaviour and/or health. If necessary, use appropriate handling methods for examination (i.e. holding frogs by their back legs).
- Any captured animals should be released at the site of capture as soon as possible after identification.

Acknowledgements

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Citation

Rowland, J. 2013. Wallum sedgefrog, *Litoria olongburensis*. Targeted species survey guidelines. Queensland Herbarium, Department of Environment and Science, Brisbane.

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