

White's tree frogs at Lim Chu Kang

Subjects: White's tree frog, *Litoria caerulea* (Amphibia: Anura: Hylidae).

Subjects identified by: Mary-Ruth Low.

Location, date and time: Singapore Island, Lim Chu Kang, Neo Tiew Lane 1; 20 May 2014; 2000 hrs.

Habitat: Farmland, among rural vegetation and buildings.

Observers: Contributors & John Wei.

Observation: Five individuals were found on a banana tree (Fig. 1 & 2) and on the roof of an adjacent hut at dusk. The snout-vent length of the individuals ranged 8 to 12 cm. Two were heard calling softly in a series of low-pitched croaks. One of the contributors (Low) accidentally rubbed her eyes with her hands after handling the frogs. She experienced a burning sensation in her eyes that was relieved after rinsing her eyes under a tap with running water. All five individuals of the White's tree frog were removed and donated to the Lee Kong Chian Natural History Museum at the National University of Singapore.

Remarks: The White's tree frog is native to northern and south-eastern Australia and southern New Guinea. It inhabits a large variety of wooded habitats, frequently in human dwellings (Cogger, 2000: 132). Males tend to be smaller than females and can be recognised by their darker throats with relatively looser skin. This hardy, long-lived (age of captives known to exceed 15 years) amphibian can be captive-bred, and is a popular pet (Bartlett, 2006: 121-123, as *Pelodryas caerulea*). As this species is available in the pet trade in Singapore, the five examples were likely to have been deliberately released. It is not known if there were any others left in the Lim Chu Kang area. All five individuals appeared to be in relatively good condition. They are either very recently introduced, or they have adapted well to the rural environment at the area. White's tree frogs are animals of the tropics and sub-tropics, and from the calling males in this observation, seem capable of establishing feral populations in Singapore. It remains to be seen if this has already happened.

Feral examples of the White's tree frogs have been recorded in New Zealand and Florida (USA), having reached those places possibly as stowaways in cargo or accidentally introduced via the pet trade. However, there have been no published accounts of this species having established breeding populations outside its native range (Kraus, 2009: 170).

The burning sensation in the eyes experienced by one of the contributors shows that the glandular secretion of this species will irritate mucous membranes that also include nose, mouth, and open wounds (see Bartlett, 2006: 123, as *Pelodryas caerulea*). While little is known about its toxicity to humans, the skin secretion of *Litoria caerulea* was found to exhibit repellent properties against blowflies and mosquitos (Williams et al., 1998, 2006).

References:

Bartlett, R. D., 2006. *The 25 Best Reptile and Amphibian Pets*. Barron's Educational Series, Inc., Hauppauge, New York, USA. 155 pp.

Cogger, H. G., 2000. *Reptiles & Amphibians of Australia*. Sixth edition. Reed New Holland, Sydney, Australia. 808 pp.

Kraus, F. 2009. *Alien Reptiles and Amphibians. A Scientific Compendium and Analysis*. Springer Science + Business Media B. V. xii + 563 pp.

Williams, C. R., Wallman, J. F. & Tyler, M. J. 1998. Toxicity of green tree frog (*Litoria caerulea*) skin secretion to blowflies *Calliphora stygia* (Fabricus) and *Lucilia cuprina* (Wiedemann) (Diptera: Calliphoridae). *Australian Journal of Entomology*. 37 (1): 85-89.

Williams, C. R., Smith, B. P. C., Best, S. M. & Tyler, M. J. 2006. Mosquito repellents in frog skin. *Biology Letters*. 2 (2): 242-245.

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Fig. 1. Frontal view of one of the five White's tree frog (about 12 cm in snout-vent length) on a banana leaf. Photograph by Mary-Ruth Low



Fig. 2. Side view of the same individual (on Fig. 1) on a banana leaf. Photograph by Manuel Mejia