

TABLE 1. Monthly stages in the ovarian cycle of 11 adult female *Sphenomorphus cyanolaemus* from Sabah and Sarawak, Malaysia. Three July females with oviductal eggs* were undergoing concurrent early yolk deposition* for a sunsequent clutch.

Month	N	Quiescent	Early yolk deposition	Enlarged follicles > 4 mm	Oviductal eggs
April	1	0	0	0	1
June	1	0	0	0	1
July	3	0	3*	0	3*
August	3	1	0	1	1
September	1	1	0	0	0
November	2	1	0	0	1

(N = 8) Belaga District, FMNH 221622; Bintulu District, FMNH 158785, 161489, 161490, 269137–269140.

A cut was made in the lower abdominal cavity and the left ovary or testis was removed embedded in paraffin, cut into 5- μ m sections and stained with Harris hematoxylin followed by eosin counterstain. Enlarged yolking follicle (> 4 mm) or oviductal eggs were counted. Histology slides were deposited in FMNH. The only stage noted in the testicular cycle was spermiogenesis in which seminiferous tubules are lined by sperm or clusters of metamorphosing spermatids. Males undergoing spermiogenesis were collected in March (N = 1), May (N = 3), July (N = 1), August (N = 2), September (N = 3), November (N = 2), December (N = 1). The smallest reproductively active male measured 43 mm SVL (FMNH 239858) and was collected in December.

Four stages were observed in the ovarian cycle (Table 1): 1) quiescent, no yolk deposition; 2) early yolk deposition, basophilic vitellogenic granules in the ooplasm; 3) enlarged follicles > 4 mm; 4) oviductal eggs. Mean clutch size (N = 8) was 2.3 ± 0.46 SD, range = 2–3. Three females from July with oviductal eggs were undergoing concurrent yolk deposition (Table 1) indicating *S. cyanolaemus* may produce multiple clutches in the same year. The smallest reproductively mature female measured 46 mm SVL (FMNH 249845) contained two oviductal eggs and was collected in November.

It is apparent *S. cyanolaemus* from Malaysia exhibits an extended reproductive cycle which appears typical for scincids from Southeast Asia (e.g., Goldberg 2013. Hamadryad 36:168–171; Goldberg 2014. Hamadryad 36:180–182; Goldberg 2015. Hamadryad 37:115–117; Goldberg and Grismer 2014. Herpetol. Rev. 45:697–698).

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VARANUS BUSHI (Bush's Monitor). DIET. *Varanus bushi* is a small-bodied member of the varanid subgenus *Odatria*, endemic to the Pilbara region of Western Australia. The species is often recorded in mulga (*Acacia* spp.) or eucalypt (*Eucalyptus* spp.) woodlands where it takes refuge under loose bark and in small hollows of fallen or standing trees. There remains little knowledge of the species' ecology since its description in 2006, in particular its diet in the wild. Examination of the stomach contents of two specimens of *V. bushi* has previously identified

the remains of a spider and a skink tail in one specimen, and the remains of a mole cricket in the other (Aplin et al. 2006. Zootaxa 1313:1–38). Here I report on the identifiable stomach contents of a road-killed specimen and identify prey species not previously recorded for *V. bushi*.

During April 2014, an adult road-killed *Varanus bushi* (SVL = 118 mm; total length = 282 mm) was located on a gravel track approximately 63 km NE of Munjina, Western Australia (22.2060°S, 119.2823°E; WGS84). Dissection and examination of stomach contents revealed three prey items, including two not previously recorded for the species. The stomach contents included a sub-adult *Gehyra variegata* (ca. 54 mm SVL) and the remains of a wolf spider (Lycosidae) and an unidentified cockroach. All three prey items were observed in the nearby mulga woodland adjacent to the track. The three prey items identified are comparable to the skink tail, spider, and mole cricket presented by Aplin et al. (*op. cit.*) indicating the diet primarily consists of small reptiles and invertebrates. This observation suggests the species feeds both terrestrially and arboreally, and as suspected the diet is similar to that of *V. caudolineatus* and *V. gilleni* identified by Pianka (1969. West. Austr. Nat. 11:76–82).

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VARANUS VARIUS (Lace Monitor). HARASSMENT BY BIRDS.

Varanus varius, Australia's largest lizard (by mass), is widespread across much of eastern Australia (Cogger 2014. Reptiles and Amphibians of Australia [7th ed.]. CSIRO Publishing, Collingwood, Victoria, Australia. xxx + 1033 pp.). It is a mainly diurnal, terrestrial, and arboreal carnivore that consumes carrion and a wide range of vertebrate prey including birds and their eggs. The Noisy Miner, *Manorina melanocephala* (Meliphagidae), is an endemic honeyeater with a widespread distribution in eastern Australia. It is often abundant in urban habitats, and is a gregarious, colonial species (Conrad et al. 1998. The Condor 100:342–349). Coalitions comprising 5–8 birds assist in territorial defense, with coalitions of up to 40 birds formed to mob potential predators (Higgins et al. 2001. Handbook of Australian, New Zealand and Antarctic Birds. Volume 5, Tyrant-flycatchers to Chats. Oxford University Press, Melbourne, Victoria, Australia. 126 pp. + 44 pp.). This note documents two observations of harassment of adult *V. varius* by *M. melanocephala*.

Observations were recorded on 5 December 2015 within the ~4.05-ha Crusader Lake Macquarie Outdoor Recreation Centre, Yarrowonga Road, Balcolyn (a “suburb” within the municipal jurisdiction of City of Lake Macquarie ~8 km ENE of Morisset), on a slightly elevated headland of the western coastal plain of Lake Macquarie, Central Coast region, New South Wales, Australia (33.09586°S, 151.54537°E, WGS 84; 18 m elev.). In the first case, at 1130–1150 h, TJH noticed a small (SVL ~0.5 m) adult *V. varius* walking across Yarrowonga Road and into the camping area; it then scurried beneath the observer's car, then moved into a nearby carpark. TJH chased the *V. varius* away from nearby small children along the ground away from the carpark, upon which it climbed the trunk of a medium-sized (height ~20 m; dbh ~30 cm) *Eucalyptus resinifera* tree to an initial height of ~1.5 m. Almost immediately, 2 *M. melanocephala* appeared from the sky and commenced “dive-bombing” the *V. varius*, accompanied by continuous loud alarm calls. They alternated attacks from either side, but did not appear to make contact with the lizard. The *V. varius* responded by moving further up the trunk to height of

~6 m where it remained stationary, clinging closely to the bark surface, apparently partly protected from aerial assaults by overhanging branches and foliage of the tree and adjacent trees; it did not engage in the typical varanid threat display. The *M. melanocephala* persisted in dive-bombing assaults for ~5 minutes until they desisted, perhaps deterred by close proximity of the observers. Habitat comprised level extensive cleared areas with 12 small buildings, unsealed entry road, parking area and campground, and scattered retained trees of former coastal Dry Sclerophyll Forest (DSF) dominated by *Allocasuarina torulosa* (Casuarinaceae), *Angophora costata*, *Eucalyptus eugenioides*, *E. resinifera*, and *E. tereticornis* (Myrtaceae), no shrub midstorey, and a mown lawn ground storey of exotic grass species (Poaceae),

In the second case, at 1335–1355 h, a slightly larger (SVL ~0.6 m) *V. varius* was observed moving slowly on the ground up a 5–10° incline in a small area of disturbed remnant native vegetation just outside the Recreation Centre property near the northern boundary fence ~15 m from the Lake Macquarie shore. Two *M. melanocephala* then appeared and commenced dive-bombing the *V. varius* from above and with continuous alarm calls. The *V. varius* immediately increased pace rapidly over the ground to nearest tree, also a medium-sized (height ~20 m; dbh ~30 cm) *E. resinifera*, ascended the trunk to a height of ~2 m, then remained stationary close to the bark surface, still harassed by the *M. melanocephala* (although partly sheltered by overhanging small branches and foliage). At this point an exotic Indian Mynah *Acridotheres tristis* (Sturnidae) also arrived and perched on a branch near the *V. varius* and examined it, but soon flew away without harassment or calling. The *M. melanocephala* dive-bombed the *V. varius* in the tree for ~5 minutes before they flew off, again perhaps deterred by close proximity of observers. Habitat comprised sloped terrain with a small area of disturbed remnant DSF comprised of an upper storey of the preceding species, a shrub midstorey with ~40% coverage comprised of saplings of *A. torulosa*, *Eucalyptus* spp., *Pittosporum undulatum* (Pittosporaceae), and exotic *Lantana camara* (Verbenaceae), and a ground storey of mixed endemic and exotic grasses and exotic herbaceous weeds of several genera and species. Weather conditions were $T_a = 32\text{--}35^\circ\text{C}$, 2/8 oktas cloud cover, high relative humidity, with strong sun and no wind.

It was of interest that neither lizard responded to aerial assaults with the typical varanid threat display of gaped mouth, erected gular pouch and inflated lateral body air sacs, instead chose to move away from the threat into shelter and apparently adopt crypsis. A range of birds are included in *V. varius* diets; *M. melanocephala* has not specifically been reported, however congeneric *M. melanophrys* has (Meek 2008. Austr. Field Ornithol. 23:153–155), hence inclusion of nestling and adult *M. melanocephala* and eggs is also likely, thus harassment of *V. varius* by *M. melanocephala* is relatively unsurprising. Although *M. melanocephala* routinely harass exotic domestic cats, and endemic raptors, crows, magpies, currawongs, and smaller avian intruders into their territories (pers. obs.), both in and out of the breeding season, harassment of *V. varius* by *M. melanocephala* has apparently been unreported in any detail hitherto, but likely frequently occurs where the two species come into contact. Arboreal hollow-nesting birds such as Sulphur-crested Cockatoos *Cacatua galerita* (Cacatuidae) have been reported harassing and even inflicting injury upon marauding *V. varius* on trees (e.g., Frauca 1963. Encounters with Australian Animals. William Heinemann Ltd., Melbourne, Victoria, Australia. vi + 154 pp.). The above observations add to the ecological portrait of *V. varius*.

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SQUAMATA — SNAKES

AHAETULLA PRASINA (Oriental Whip Snake). DIET. *Ahaetulla prasina* is an arboreal colubrid commonly found in rural, agricultural, urban, and forested habitats throughout Southern Asia. It is known to feed on lizards (including agamids, skinks, and geckos), snakes, birds, and small mammals (Hnizdo and Krug 1997. Sauria 19:3–12; Keng and Tat-Mong 1989. Fascinating Snakes of Southeast Asia: an Introduction. Tropical Press Sendirian Berhad, Kuala Lumpur, Malaysia. 124 pp.; David and Vogel. The Snakes of Sumatra: An Annotated Checklist and Key with Natural History Notes. Edition Chimaira, Frankfurt am Main, Germany. 260 pp.; Malkmus et al. 2002. Amphibians and Reptiles of Mount Kinabalu (North Borneo). Serpents Tale NHBD/Gantner Verlag Kommanditgesellschaft. 424 pp.). Although *A.*

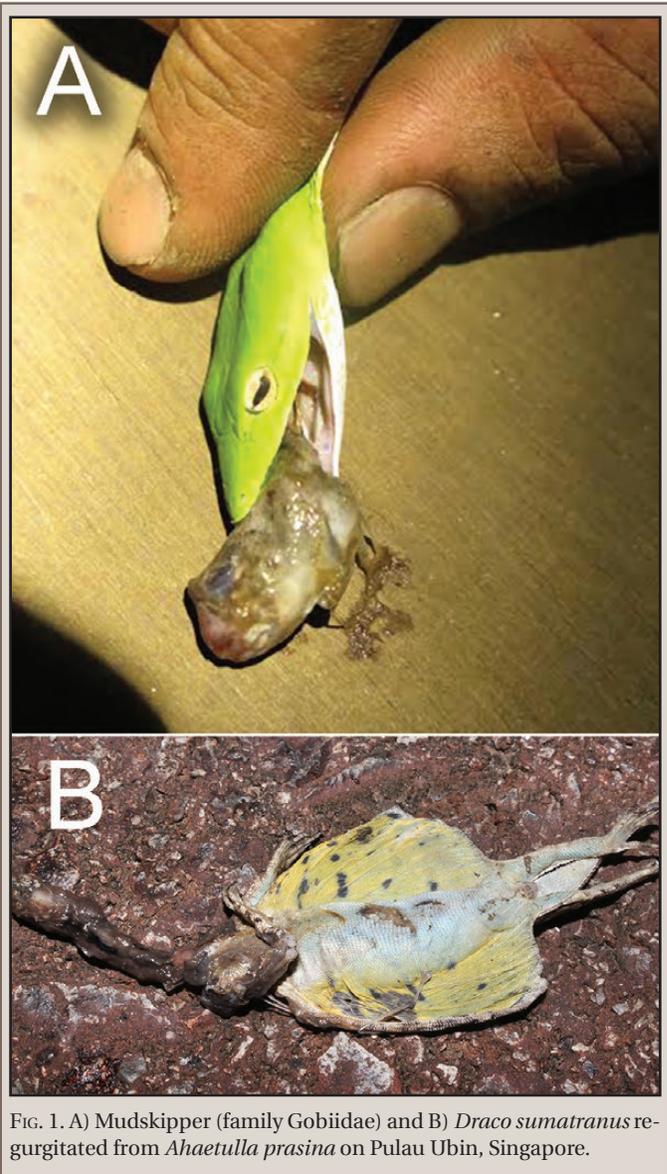


FIG. 1. A) Mudskipper (family Gobiidae) and B) *Draco sumatranus* regurgitated from *Ahaetulla prasina* on Pulau Ubin, Singapore.