

Capricorn ctenotus

Ctenotus capricorni

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

Identification

A robust, medium-sized striped skink (snout-vent length 65 mm) with a series of stripes and weak, upper lateral spots. Subdigital lamellae are moderately broadly callose. Olive brown in colour with a pale-edged black vertebral stripe from the neck to the base of the tail. A narrow pale-brown stripe may occur on the dorsal surface and an obscure narrow black laterodorsal stripe to the base of the tail. A narrow whitish dorsolateral stripe runs to the base of the tail. The upper flanks are pale greyish-brown with a series of indistinct dots or dashes, sometimes extending in front of the forelimb, along with a greyish-white midlateral stripe. Limbs are olive brown streaked with greyish-white (Wilson 2005; Wilson and Swan 2003).



Photo by Steve Wilson

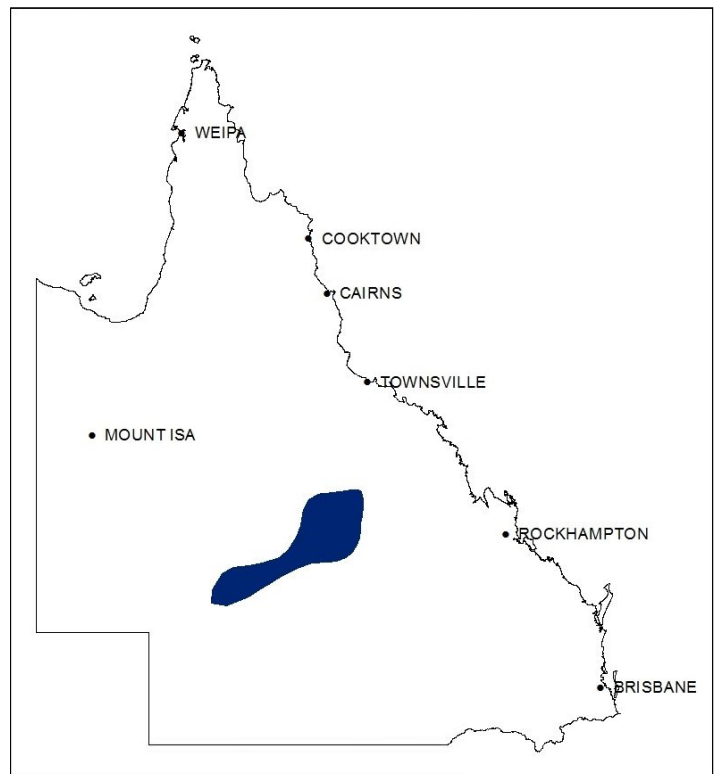
Distribution

Ctenotus capricorni is a Queensland endemic, being restricted to an area of central Queensland around Longreach, Jericho and Aramac. The distribution extends in a narrow band from near Windorah in the south-west to approximately 200 km north-east of Barcardine in the north. Most records are from around Jericho and Aramac and the Windorah population may be a disjunct population as there appears to be little suitable habitat in between.

Habitat

Habitat is subtropical semiarid woodland with an understorey of shrubs, spinifex hummock grass *Triodia* spp. and soft tussock grass on sandy soil (Ehmann 1992; Cogger 1996). The presence of spinifex hummocks in the ground layer, interspersed with bare ground (rather than tussock grasses) appears to be favoured habitat for the species (Kutt 2004).

Habitats include those dominated by inland yellow jacket *Eucalyptus similis*, White's ironbark *E. whitei* and bloodwoods *Corymbia* spp., with a sparse ground layer dominated by gummy spinifex *Triodia pungens* or buck



spinifex *T. mitchellii* (Qld Herbarium 2013). Recorded from Regional Ecosystems 10.5.1, 10.5.11, 10.10.5 (Kutt 2004, Wildnet database 2013).

Seasonal and timing considerations

Ctenotus are known to be spring-summer breeders (James 1991). More than half of the known records of this species were captured between December to February (Wildnet database 2013), although sampling has not occurred uniformly.

Surveys should be carried out during warmer months (September to March) of the year, and are best conducted on warm, dry days within the survey period.

Recommended survey approach

Ctenotus capricorni is sympatric with at least four other species of ctenotus in the Desert Uplands (*C. hebetior*, leopard ctenotus *C. pantherinus*, red-earth ctenotus *C. rosarium* and eastern barred wedgesnout ctenotus *C. strauchii*) (Kutt 2004). Although many ctenotus species can look superficially similar; the species listed here are all distinct from *C. capricorni* in pattern, so experienced observers may be able to identify *C. capricorni* without capture, provided they get a reasonable sighting. For less experienced observers, definitive identification will rely on capturing individuals. Indirect signs such as burrows and tracks may also help to target further trapping or active searching effort.

Active diurnal searches can achieve greater coverage within project areas and therefore should be the primary survey approach in targeted surveys for this species. If the active searching does not detect the species in suitable habitat, then the secondary methods (pitfall/funnel trapping and burrow excavation) can be employed.

Active searching

Active searches can be conducted in a wide range of vegetation types, but may be particularly useful in spinifex on sandy soils. As *C. capricorni* shelters under spinifex hummocks, active searches should first scan the area for active or basking individuals. Under optimal conditions, searches are best conducted in the morning when individuals are likely to be basking and starting to become active. However keep in mind that the optimal time of day (and day within the survey period), to conduct active diurnal searches depends heavily on season and weather conditions on adjacent days.

Excavating burrows

Ctenotus capricorni shelters in shallow burrows in soil/sand under spinifex hummocks (Wilson and Knowles 1988). *Ctenotus* burrows tend to have flat-bottomed entrances with curved roof to the tunnel. It may be worth excavating an active burrow (shown by a spray of fresh sand) if no ctenotus have been identified/captured using other methods. Slide something long and flexible (e.g. plastic packing tape) carefully down the burrow, keeping in mind that tunnels can abruptly change direction. Carefully clear away the sand/soil working along the tape from the entrance. Alternatively target the area around fresh ctenotus diggings with funnel traps (with or without drift fence).

Pitfall and funnel trapping

Pitfall arrays, in combination with drift fence and funnel traps, can be placed in semi-arid sandy areas, with or without an over-story of scattered eucalypts or *Corymbia* spp. Place pitfall traps in areas with spinifex interspaced with bare ground within the survey area where possible.

Survey effort guide

Ctenotus capricorni survey data (where sites were resurveyed during another survey period) are only available for seven sites on one property north-east of Aramac (Kutt 2004). Here the species was detected at sites using the generic method (1 person hour of active searching per survey plus 4 pitfall traps for four nights) on 11 out of a possible 14 occasions (~80% detection rate). Therefore, the recommended level of effort below may provide a reasonable opportunity to detect *C. capricorni* if present in the project area.

Minimum effort per 50 ha of suitable habitat during optimal conditions			
Survey technique	Effort per survey period	Effort per survey	Number of survey periods
Active diurnal searches (50 m x 50 m plot)	60 minutes searching per plot 4 plots per 50 ha (= 240 min per 50 ha) (or 1 plot per 5 ha if survey area is less than 50 ha)	Two 30 person-minute searches per plot	2 surveys
Funnel traps	1 plot per 50 ha (or 1 plot per 10 ha if survey area is less than 50 ha) 24 funnel trap nights	4 nights	2 surveys
Pitfall traps	1 plot per 50 ha (or 1 plot per 10 ha if survey area is less than 50 ha) 16 pitfall trap nights	4 nights	2 surveys

e.g. Active searches: 4 plots per 50 ha, with 2 searches of 30 person-minutes per survey site within the survey period. Trapping: 1 plot per 50 ha, with 4 pit traps and 6 funnel traps set for 4 consecutive nights per survey.

Ethical and handling considerations

Active searching

- During active searches, always replace habitat to the best of your ability, such as re-rolling rocks and logs back into place.
- If you are working in a fragile environment (e.g. sandstone escarpment) every attempt should be made to keep damage from actively searching to a minimum.
- Any captured animals should be released at the site of capture as soon as possible after identification.

Pitfall and funnel trapping

- Traps must be thoroughly checked early in the morning before temperatures become too hot. This also reduces the risk of predation by diurnal predators such as goannas.
- Shelter should always be provided to reduce predation and exposure (heat, cold and dehydration) of trapped animals. Place shelter in the bottom of buckets. For funnel traps, we recommend at least 70% shade-cloth however silver roof insulation or dense vegetation are alternatives.

- Sudden downpours pose a drowning risk; place floats in the bottom of buckets. Buckets must be closed if they begin to fill with water and should not be reopened until the drowning risk has passed.
- Ant predation can be a problem so locate pitfall traps away from obvious ant nests and be vigilant for ant activity. If ants are found attacking captured animals and cannot be controlled using low toxicity insecticides, traps should be closed immediately.
- Consider weed and pathogen spread when using equipment in multiple locations as soil, seeds and spores can be transported in and on buckets, funnels, pegs and drift fence.
- Exercise caution when checking traps as they may contain venomous animals; personnel should be trained to remove venomous snakes.

Acknowledgements

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Citation

Venz, M. 2014. Capricorn ctenotus, *Ctenotus capricorni*. Targeted species survey guidelines. Queensland Herbarium, Department of Environment and Science, Brisbane.

Key references

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