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A New Australian Scincid Lizard, *Menetia concinna*, from the Alligator Rivers Region, Northern Territory

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ABSTRACT. Four species of the genus *Menetia* occur in the Alligator Rivers region of the Northern Territory. The new species *Menetia concinna* is described with an account of its distribution and that of its congeners in the region, *M. alanae* Rankin, *M. greyii* Gray and *M. maini* Storr.

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The genus *Menetia* was formerly regarded as monotypic with a nearly Australia-wide distribution. Recent studies by Storr (1976, 1978) described the new species *Menetia maini*, *M. surda* and *M. amauro* in Western Australia while Ingram (1977) described the new species *M. zynja* and *M. timlowi* from Queensland. Rankin (1979) revised the *Menetia* species occurring in the Northern Territory, describing the new species *Menetia alanae* and reviewing the status of *M. greyii* and *M. maini* in that area; he placed *M. zynja* in synonymy with *M. maini*.

In the course of reviewing *M. greyii*, Rankin (1979) tentatively identified as *M. greyii* a specimen from Cahills Crossing on the East Alligator River, while noting that it possibly represented a new species. Field work in the region of the Jabiluka uranium mining project area 19 km SW of Cahills Crossing has produced further specimens, confirming Rankin's suggestion of a new species from that area. In this paper I describe the new species, provide an account of the habitat and known distribution, furnish an updated key to the *Menetia* species of the Northern Territory and

report range extensions for the three other species known from the Northern Territory.

Taxonomy

The terms used here for the headshields bordering the rostral margin of the eye differ from those used by previous workers.

Rankin (1979) used the term *presuboculars* for those scales located below a diagonal line drawn between the posterior loreal and the subocular supralabial (giving 1 presubocular in *M. greyii*, and 2 in *M. alanae*). This usage was also adopted by Ingram (1977) and Storr (1978).

The scale definitions employed here follow Peters (1964). The two large scales immediately preceding the eye and abutting the posterior loreal are the *upper* and *lower preoculars*. The scales posterior to the lower preocular, and interposed between the orbit and the supralabials, are *suboculars* (= the second presubocular described by Rankin for *M. alanae*) (see Fig. 2).

Key to the Species of *Menetia* Occurring in the Northern Territory

1. Second supraciliary contacting prefrontal, preventing contact between the first supraciliary and first supraocular 2
 - Second supraciliary not contacting prefrontal, allowing contact between first supraciliary and first supraocular *M. maini*
2. Anterior subocular present 3
 - Anterior subocular absent *M. greyii*

- 3. Midbody scale rows 22–24; pale midlateral stripe absent; poor demarcation between dorsal and upper lateral zone in adults *M. alanae*
- Midbody scale rows 20; pale midlateral stripe present at least anteriorly to level of forelimb; dorsal surface well demarcated from upper lateral zone . *M. concinna*

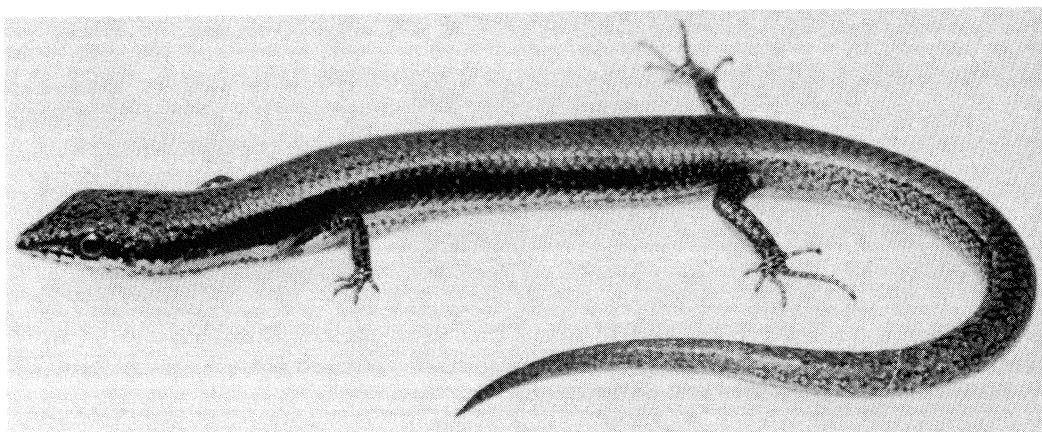


Fig. 1. Photograph of a live specimen of *Menetia concinna*.

***Menetia concinna* n.sp.**

Figs 1, 2

Diagnosis. *M. concinna* can be distinguished from all other members of the genus by the following combination of characters: second supraciliary contacting the prefrontal, preventing contact between first supraciliary and first supraocular; anterior subocular present; ear opening present; midbody scale rows 20; bold dark upper lateral zone well defined from lighter dorsal surface and prominent pale midlateral stripe present anteriorly at least to level of forelimb.

Holotype. Australian Museum R88583, Jabiluka uranium mining project area, Northern Territory, 12°33' S 132°55' E; grid reference 729118 sheet 5472 (Edition 1) National Map Series "Cahill" (Division of National Mapping); collected by R.A. Sadlier, 8 August 1979.

Paratypes. All Australian Museum specimens are from the Jabiluka uranium mining project area, NT, collected by R.A. Sadlier August/September 1979.

AM R88584-88587 (same data as holotype); AM R88696, AM R88746, AM R88814, grid reference 691208 sheet 5473 (Edition 2) Series R621, "East Alligator", 12°28' S 132°52' E, 21-22 August 1979.

AM R88896, AM R88989, grid reference 768156 sheet 5472 (Edition 1) National Map Series, "Cahill", 12°31' S 132°57' E, 18 September 1979.

Northern Territory Museum (NTM) 2665, (not NTM 2885 as cited by Rankin [1979] with inaccurate locality of Cahills crossing, East Alligator River), 34.5 km SW Oenpelli, NT, collected by D. Metcalfe and P. Horner, 28 December 1976.

Description. Maximum SVL 31 mm; axilla to groin length 61.4–64.5% of SVL (\bar{x} = 62.8, N = 8);

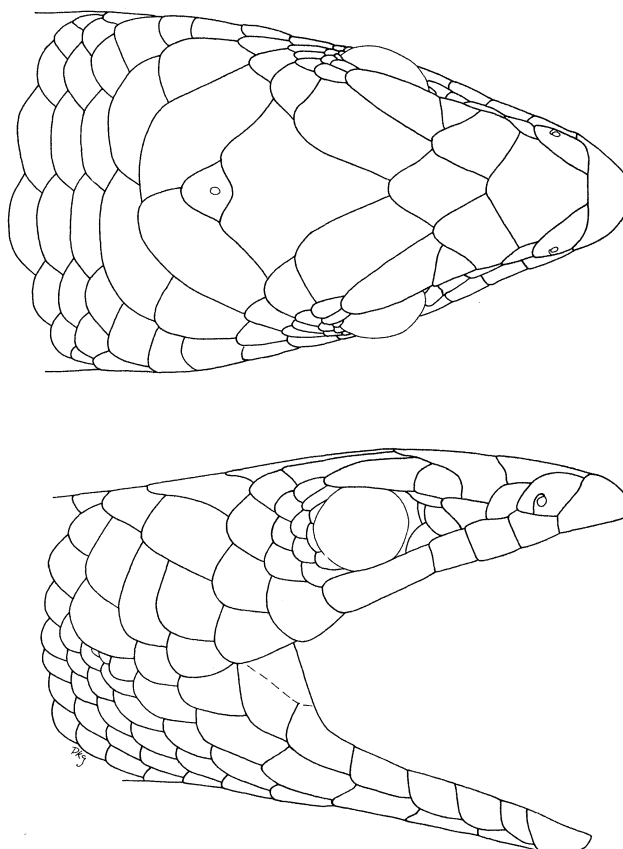


Fig. 2. The head of the holotype of *Menetia concinna* (AM R88583) in dorsal and lateral view.

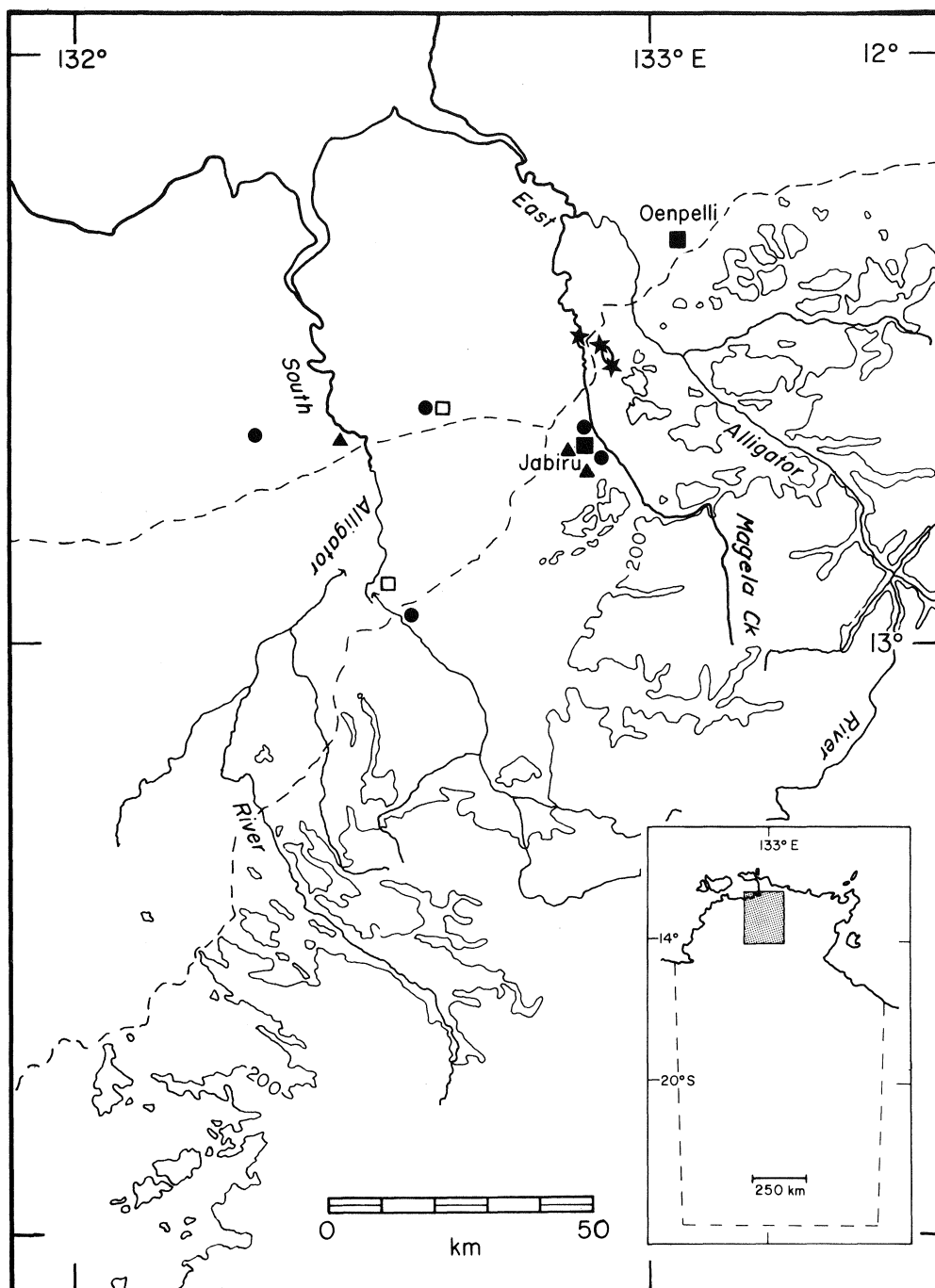


Fig. 3. Map showing the distribution of the four species of *Menetia* encountered in the Alligator Rivers region.

- ★ *M. concinna* □ *M. maini*
● *M. greyii* ▲ *M. alanae*

Inset: map of the Northern Territory with shaded sector showing the position and area occupied by main map.

hindlimb length 29.0–34.5% of SVL (\bar{x} = 31.9, N = 8); forelimb to snout length 32.2–36.4% of SVL (\bar{x} = 34.3, N = 8); tail length 132.7–181.8% of SVL (\bar{x} = 155.6, N = 3).

Nasals moderately separated with the naris situated centrally; prefrontals large, narrowly separated (70%) or in point contact; frontoparietals fused, forming single

shield; interparietal distinct; parietal eye prominent and situated anteriorly in interparietal; single pair of nuchals; supraciliaries 3, second contacting prefrontal; two loreals in horizontal series; upper preocular elongate and narrow, lower preocular almost as wide as high; single anterior subocular; upper labials 6, fourth below centre of eye; lower eyelid an immovable clear spectacle

covering eye; ear opening small and partially covered by large scale anteriorly.

Dorsal scales smooth, in 20 rows at midbody; paravertebral scales 58–61 (\bar{x} = 59.7, SD = 0.9, N = 9) counted from first scale behind parietals to a point opposite posterior margin of preanal scales; lamellae beneath fourth toe 16–19 (\bar{x} = 18, SD = 0.8, N = 9), each with a pale brown flat callus.

Colour and pattern in alcohol. Dorsally light brown-grey with fine dark spotting on each scale, most prominent medially and on head shields. Upper lateral stripe dark brown-black, commencing at base of rostral and passing through eye, recommencing broadly (equal in width to diameter of orbit) behind eye and continuing along body, weakening posterior to hindlimb to become a mottled area of lighter brown and cream flecks barely distinguishable from slightly lighter dorsal tail colour. White midlateral stripe from anterior upper labials passing through ear and over forelimb, sometimes continuing to midway down body, becoming more diffuse posteriorly and disappearing a short distance behind hindlimb. Line of fine dark flecks below midlateral stripe anteriorly between ear and forelimb, continuing as light brown and cream mottle over most of lower lateral region of body, excluding tail. Fore- and hindlimbs mottled. Venter white. Soles light brown, subdigital lamellae mid-brown without obvious dark calli. Juvenile specimens with light grey-brown dorsum, sharply demarcated from bold dark upper lateral zone, prominent pale midlateral stripe continuing to groin.

Distribution and habitat. All known specimens of *M. concinna* are from the western edge of the Arnhem Land escarpment on the East Alligator River drainage (Fig. 3).

Specimens from the Jabiluka project area were collected from a number of widely separated woodland sites, with a single observation from the top of a sandstone outlier.

The species was most commonly found beneath the numerous leaf piles in open riparian woodland (AM R88583-88587), being collected by removing the leaf litter and sifting through the thin layer of finer material remaining over the compact sand substrate.

The two locations at which specimens were pit-trapped were mixed woodland with a dense leaf litter cover and fine sand substrate; one site was in *Eucalyptus miniata* woodland on the eastern edge of the Jabiluka Billabong flood plain fringe (AM R88696, AM R88746, AM R88814), while the other site bordered a tributary of Swift Creek (AM R88896, AM R88989) close to the main escarpment. NTM 2665 was recorded as "active in leaf litter near escarpment".

Throughout the two months of field work on the Jabiluka project area, which involved extensive pit-trapping over a wide range of habitats, the only species

of *Menetia* encountered was *M. concinna*. From the adjacent Jabiru project area 10–14 km south, both *M. greyii* and *M. alanae* were recorded. *Menetia greyii* was pit-trapped on two occasions in open woodland with speargrass on the lateritic soils that cover much of the project area, while *M. alanae* was recorded from two sites in the mixed eucalypt woodland of the sandy levee banks of Gulungul Creek, running from the Mt Brockman massif. On the Magela Creek drainage *M. alanae* and *M. concinna* occupy nearly identical riparian habitats at two adjacent sites, while *M. greyii* occupies the totally different open woodland habitat.

Etymology. The name *concinna* was proposed in manuscript by the late Peter Rankin. It is Latin for "pleasing on account of the harmony and proportions of its parts; elegant; neat".

Comments. Rankin's examination (1979) of *M. greyii* was comprehensive. I have examined specimens of *M. greyii* from the Northern Territory lodged in the Australian Museum and those specimens added to the NTM collection since Rankin's study. My results are consistent with that work.

The only point of possible disagreement is the juvenile specimen NTM 2828 from 32 km NE of Oenpelli which Rankin tentatively placed in *M. alanae*. This specimen has 22 midbody scale rows, prefrontals narrowly separated, no evidence of an anterior subocular on either side and no trace of a pale midlateral line or a thin dark dorsolateral line (but the specimen is markedly discoloured by formalin). In life it was reported to have had a bright blue tail (Mr Brian Jukes, cited in Rankin, 1979). A colour transparency of a subadult *M. greyii* (Australian National Wildlife Collection ANWC 3499) taken by Mr John Wombey also shows a blue tinge to the tail. Hence this specimen is more likely to be *M. greyii* than *M. concinna* or *M. alanae*.

Collections made by the Division of Wildlife Research and Rangelands in surveying the Kakadu region have recorded *M. alanae* (ANWC 3459-3460, 3492, 3497-3498) from open forest and *M. greyii* (ANWC 3377, 3499) from woodland sites associated with the South and East Alligator drainage systems. Also among these collections are specimens of *M. maini* (ANWC 2675, 3494-3496) not previously recorded from the Alligator Rivers region, which were collected from rainforest sites on the very upper reaches of the South Alligator River and from a lowland woodland site.

The records of *M. alanae* from the Jabiru project area represent a significant easterly extension (220 km) to the range presented by Rankin (1979). Specimens from the Alligator Rivers region differ from those from the type locality, SE of Mt Carr, in that the prefrontals are in point contact or narrowly separated; topotypic specimens have the prefrontals broadly contacting.

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