Body blackish or brown. Tarsal claw without subapical tooth (Seychelles). . . . . ***simillimus***

Odontomachus coquereli Roger
Figures: **worker** 1b, 10a,b, 13c; **queen** 10c,d; **male** 11a,b,e; **map** 14a

Type material:

Odontomachus coquereli Roger, 1861: 30 [26]. Lectotype: worker, Madagascar (Coquerel) (ZMHB), **present designation** [examined] AntWeb CASENT0104549.

Odontomachus coquereli minor Emery 1899: 273 [27]. Lectotype; worker, Madagascar, Baie d' Antongil (Mocquerys) (MSNG), **present designation** [examined] AntWeb CASENT0102021. Synonymized with *coquereli* by Brown, 1978: 557 [2].

Worker measurements: maximum and minimum based on n = 45 from Madagascar: HL 2.69–3.27, HW (across vertex) 1.26–1.77, HW (across upper eye margin) 1.54–2.02, CI 57–67, EL 0.46–0.55, ML 1.76–2.16, MI 61–68, SL 3.04–3.96, SI 164–207, WL 4.18–5.11. FL 3.32–4.68, PW 1.11–1.53.

Queen measurements: maximum and minimum based on n = 5 from Madagascar: HL 2.81–2.94, HW (across vertex) 1.39–1.55, HW (across upper eye margin) 1.83–1.98, CI 62–71, EL 0.45–0.55, ML 1.66–1.81, MI 59–62, SL 3.07–3.29, SI 155–179, WL 4.35–4.56, FL 3.60–3.84, PW 1.28–1.43. Preapical teeth count 7–10.

Male measurements: maximum and minimum based on n = 5 from Madagascar: HL 1.11–1.22, HW 1.41–1.57, CI 128–134, EL 0.78–0.90, SL 0.30–0.38, SI 21–23, WL 3.38–3.85, FL 2.90–3.16.

Worker Diagnosis: Workers of this species can be easily distinguished from *troglodytes* by their larger size, mandible with long, acute apical and preapical teeth and lack of extraocular furrows and temporal ridges on vertex. Brown [2] provides a description and additional references.

Distribution and biology. *O. coquereli* is endemic to Madagascar and is restricted to eastern and northern montane rainforest, lowland rainforest, and littoral forest from 10 to 1325 m (Fig. 10a). It is most abundant at mid-elevations in the northeast such as in Marojejy National Park. Nests of *O. coquereli* are most commonly found in rotten logs and consist of small colonies. Queens of *coquereli* are wingless and very similar to workers; colonies reproduce by fission [28]. Males are collected in Malaise traps and yellow pan traps. Workers forage on the ground day and night. A few times BLF has seen solitary foragers high up on trunks and branches of large trees. It is not clear if they are foraging for plant or insect liquids up in the canopy.

There is notable geographic variation in shape of petiole, sculpture and number of preapical teeth. Preapical teeth and denticles range from 7–12. Occasionally, adjacent teeth may be fused at base to form a single bidententate tooth. However, there is no consistent concordant pattern to this variation. Molecular data are also extremely variable – suggesting that these isolated populations have long been separated. Rather than describing these populations as distinct species, we leave them here as a single species – a hypothesis that can be tested in the future with subsequent experiments in both the field and lab.

CO1: The barcode region is extremely variable (Fig. 16) – there is evident isolation by distance which is largely concordant with the biogeographic regions proposed by Wilme *et al.* [29].

Diagnostic barcoding loci. *O. coquereli*: T-96, C-196, T-211, T-280, A-283.

Discussion: *Odontomachus coquereli* from Madagascar, the only species in the genus where winged queens have never been found. Molet *et al.* [28] investigated the Marojejy population of *O. coquereli*, and based on demography, morphometry, allometry and ovarian dissections demonstrated that the winged queen caste has been replaced by a wingless reproductive caste and that the strategy of colonial reproduction is fission. A single wingless reproductive (ergatoid) was found in each colony. The smallest colonies consisted of at least 5 workers and the largest colonies never exceeded 40 workers, indicating a threshold size at which a colony divides in two daughter colonies. In contrast, *O. troglodytes* reproduces by non-claustral independent foundation and colonies can reach 1300 workers [30]. As in *A. goodmani* and *A. boltoni*, the other species without winged queens – there are deep CO1 divergences between different collection localities.

Specimens examined for *Odontomachus coquereli*:

Specimens from 134 separate collection events from the following 57 localities were examined. MADAGASCAR: Province **Antsiranana**: Forêt de Binara, 9.4 km 235° SW Daraina; R.S. Manongarivo, 12.8 km 228° SW Antanambao; R.S. Manongarivo, 14.5 km 220° SW Antanambao; RNI Marojejy, 8 km NW Manantenina; Parc National de Marojejy, Manantenina River,

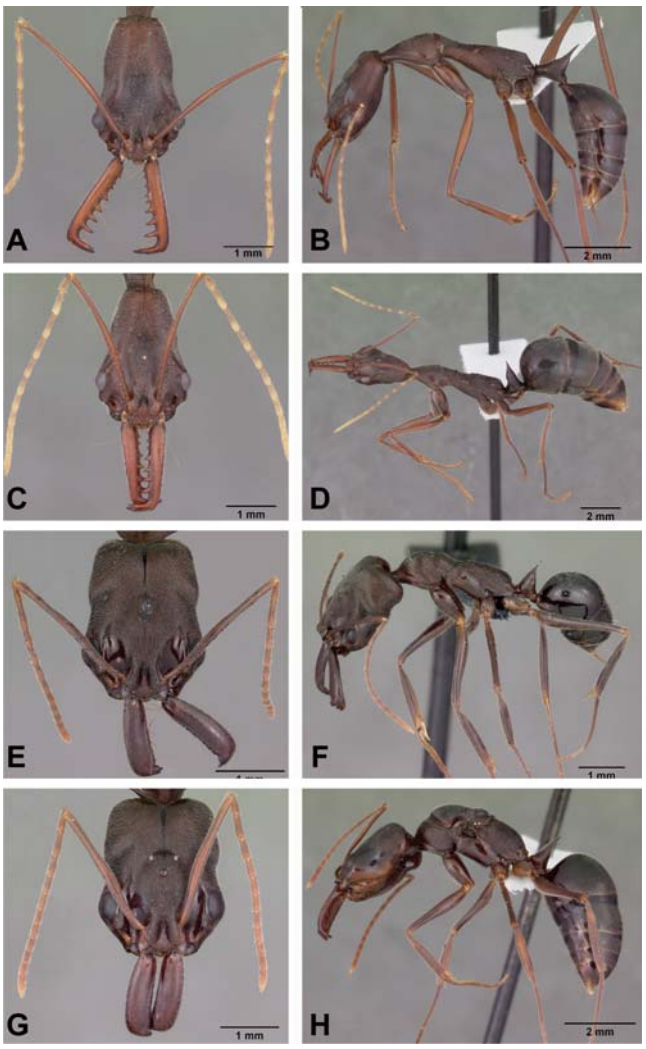

Figure 10. *Odontomachus* spp. full face and lateral view. A–B, *coquereli* worker CASENT0009409. C–D, *coquereli* ergatoid queen CASENT 0104947. E–F, *troglodytes* worker CASNET0047308. G–H, *troglodytes* dealate queen CASENT0100313.
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