



Figure 5. *Anochetus* workers, upper part of petiole from front view. A, *boltoni* CASENT0104542. B, *goodmani* CASENT0104543. C, *grandidieri* (large form) CASENT0497580. D, *madagascarensis* CASENT0498309. doi:10.1371/journal.pone.0001787.g005

knowledge, through fission. Though the queen caste is not known, based on overall similarity of workers with *A. goodmani*, it is likely that the queen of *boltoni* is wingless. Queens have never been collected during the 12 month malaise trap sampling even though males were collected. Species that reproduce by fission may show greater geographic differences in morphology and COI.

Additional material examined for *Anochetus boltoni*: In addition to the type material, specimens from 4 additional collecting events from the following three localities were examined in this study. MADAGASCAR: Province **Antsiranana**: Parc National de Marojejy, Manantenina River, 27.6 km 35° NE Andapa; Parc National de Marojejy, Manantenina River, 28.0 km 38° NE Andapa; Forêt Ambanitaza, 26.1 km 347° Antalaha. This material shows greater variation in number of denticles along blade of mandible, ranging from 5–7, compared to the paratyptic material.

***Anochetus goodmani* Fisher sp. nov.**

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Figures: **worker** 2e,f; **queen** 2g,h; **map** 6a

Type Material: *Holotype* worker, MADAGASCAR, Forêt de Binara, 7.5 km 230° SW Daraina, 13°15'18"S, 049°37'00"E,

375 m, 1–4 Dec 2003 (coll. B. L. Fisher et al.), collection code: BLF09638, pin code: CASENT0498309 (CAS). *Paratypes*: 8 workers with same data as holotype but pins coded, CASENT104548, CASENT0498310, CASENT0498311, CASENT0006944, CASENT0006945 (BMNH, MCZ, CAS); COI Barcode from paratype collection and coded CASENT0498310-D01.

Worker measurements: maximum and minimum based on all specimens, n = 15, (holotype): HL 1.77–2.01 (1.92), HW 1.55–1.81 (1.77), CI 86–92 (92), EL 0.35–0.43 (0.42), ML 1.04–1.15 (1.11), MI 56–66 (58), SL 1.68–1.97 (1.79) SI 101–109 (101), WL 2.52–2.89 (2.66), FL 1.85–2.17 (2.03), PW 0.92–1.06 (1.01).

Queen (ergatoid) measurements: maximum and minimum based on n = 5. HL 1.62–1.79, HW 1.49–1.65, CI 91–93, EL 0.37–0.41, ML 0.92–1.02, MI 55–59, SL 1.56–1.71, SI 99–106, WL 2.33–2.55, FL 1.77–1.91, PW 0.88–0.99.

Worker Diagnosis: Blade of mandible with five teeth and denticles located at the distal half of the blade length. Petiole dorsal margin without spines. In front view, the dorsal petiolar margin flat with lateral margin rounded (Fig. 6b). Pilosity, sculpture as in Figures 2e,f.

The species is most similar to *A. boltoni* but can be easily distinguished by its petiole node without apical spines.