

27.6 km 35° NE Andapa; Parc National de Marojejy, Manantenina River, 28.0 km 38° NE Andapa; Parc National de Marojejy, Antranohofa, 26.6 km 31° NNE Andapa; Forêt Ambanizana, 26.1 km 347° Antalaha; Rés. Anjanaharibe-Sud, 6.5 km SSW Befingotra; Rés. D' Anjanaharibe-Sud, 17 km W Andapa; Province **Toamasina**: 6.9 km NE Ambanizana, Ambohitsitondroina; Montagne d'Anjanaharibe, 19.5 km 27° NNE Ambinanitelo; Montagne d'Anjanaharibe, 18.0 km 21° NNE Ambinanitelo; Montagne d'Akirindro 7.6 km 341° NNW Ambinanitelo; Parc National Masoala, Ambanizana, ; 5.3 km SSE Ambanizana, Andranobe; 1 km W Andampibe, Cap Masoala; Parc National Mananara-Nord, 7.1 km 261° Antanambe; Rés. Ambodiriana, 4.8 km 306° Manompana, along Manompana river; Ile Sainte Marie, Forêt Kalalao, 9.9 km 34° Ambodifotatra; Parcelle E3 Tampolo; Mahavelona (Foulpointe); Mahavelona (Foulpointe), Forest Andalava; Reserve Betampona, Camp Vohitsivalana, 37.1 km 338° Toamasina; Reserve Betampona, Camp Rendrir- endry 34.1 km 332° Toamasina; F.C. Andriantantely; 6 km ESE Andasibe (= Perinet); Province **Fianarantsoa**: Nat. Pk.Ranomafana, Miaranony Forest; Ranomafana Nat. Park, Valoloaka forest; Forêt d'Ambalagoavy Nord, Ikongo, Ambatombé; 45 km S. Ambalavao; Rés. Andringitra, 43 km S Ambalavao.

Odontomachus simillimus Smith:

Figures: **worker** 12a,b, 13b; **queen** 12c,d; **male** 12e,f;

Type material:

Odontomachus simillimus Smith, 1858: 80 [31]. Type locality: Fiji Islands [not examined]. Junior synonym of *haematodus* by Roger, 1861: 24 [26]; revived from synonymy by Wilson, 1959: 499 [32].

Odontomachus haematoda var. *breviceps*, Crawley, 1915: 239 [33]. Type locality: Christmas Island, Australia (BMNH) [not examined]. Synonymized with *simillimus* by Brown, 1976: 106 [1].

Odontomachus haematodes var. *fuscipennis* Forel 1913: 19 [34]. Type locality: Peradeniya, Sri Lanka (MNHB?) [not examined]. Synonymized with *simillimus* by Wilson, 1959: 499 [32].

Ponera pallidicornis Smith, F. 1860: 73 [35]. Type locality: Makassar, Celebes (BMNH) [not examined]. Synonymized with *simillimus* by Brown, 1976: 106 [1].

Worker measurements: maximum and minimum based on $n = 10$ from Madagascar: HL 2.33–2.63, HW (across vertex) 1.64–2.03, HW (across upper eye margin) 1.77–2.06, CI 75–81, EL 0.20–0.23, ML 1.14–1.28, MI 48–51, SL 2.16–2.43, SI 109–123, WL 2.62–3.06. FL 2.29–2.56, PW 1.02–1.24.

Queen measurements: maximum and minimum based on $n = 5$ from Madagascar: HL 2.37–2.55, HW (across vertex) 1.79–2.03, HW (across upper eye margin) 1.87–2.13, CI 79–84, EL 0.49–0.53, ML 1.17–1.30, MI 49–52, SL 2.15–2.38, SI 111–118, WL 3.13–3.19. FL 2.36–2.58.

Male measurements: maximum and minimum based on $n = 1$ from Madagascar: HL 0.89, HW 1.19, CI 133, EL 0.59, SL 0.19, SI 16, WL 2.44. FL 1.73.

Worker diagnosis: Workers and males are very similar in morphology and size to *troglydites*. Bivariate plots of metric measurements did not distinguish the two species. Workers and queen have fine, glossy dorsal striation on head and mesosoma. Metasternal process low and rounded (Fig. 13b). Metasternal process can be viewed in mounted specimens by removing a hind leg and coxa. Brown [1] provides a description and additional references.

Distribution and biology. Known though most of the literature as "*O. haematodes*" (Linnaeus) 1758 which is a different species. Forel's [25:159] record of "*O. haematodes*" from Seychelles, Mahé most likely refers to *simillimus*.

Found in clearings and secondary growth throughout the Indo-Pacific. The records from the Seychelles clearly represent an introduction. *O. simillimus* is not known from Madagascar and may have difficulty in establishing on Madagascar because of the presence of the morphologically and ecologically similar *O. troglydites*.

CO1. The average within species CO1 divergence for *O. simillimus* was 3.212% with much variation between islands (Max 5.786, SE = 0.273). Importantly, although bivariate plots of worker measurements do not reliably separate *O. simillimus* from the ecologically similar *O. troglydites*, the two species are, on average, 7–8% divergent within the CO1 barcode.

Diagnostic barcoding loci. *O. simillimus*: C-265, T-267, T-528.

Specimens examined for *Odontomachus simillimus*: Additional details are provided for the specimens from Seychelles.

INDONESIA: Irian Jaya, Maffin Bay; PT. Freeport Concession, Siewa Camp; PAPUA NEW GUINEA: Los Negros, Admiralty Islands; Milne Bay, Morobe, Finschhafen, Biak Island; PHILIPPINES: Leyte, Tacloban; SEYCHELLES: Silhouette Island, Grande Barbe, 7/22–23/2000, J.Gerlach; Silhouette Island, Jardin Marron, 7/5/2000, J.Gerlach; SOLOMON ISLANDS: Kungana Bay, Rennell Island; Guadalcanal, Tenaru River; Kungana Bay, Rennell Island, Anuda Island; NW end of Bellona Island; Tevia Bay, Vanikoro Island, Santa Cruz Islands; Mohawk Bay, Matema Island, Santa Cruz Islands, Pavuvu, Russell Island; VANUATU: Espiritu Santo Island.

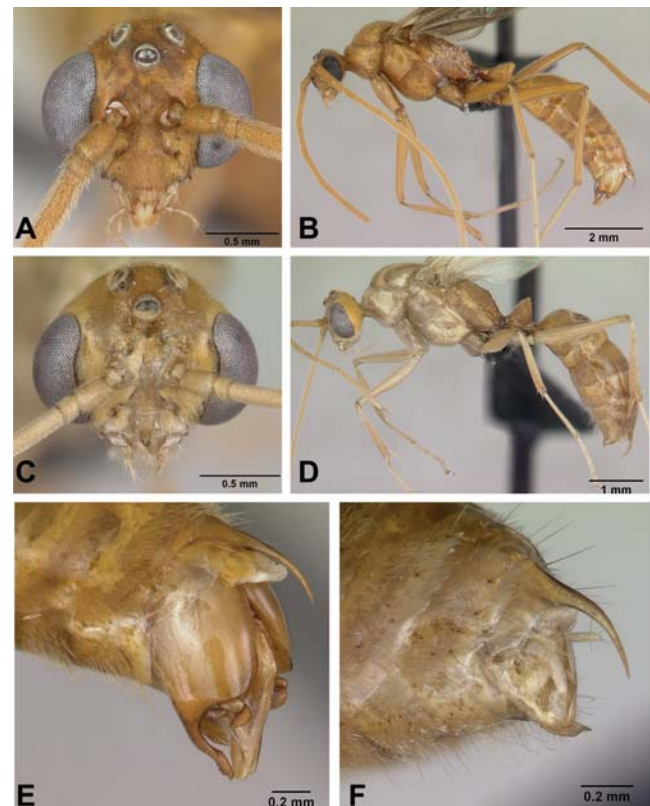


Figure 11. *Odontomachus* spp. males full face, lateral view, and oblique lateral view of terminalia. A, B, and E, *coquereli* CASENT0063858. C, D, and F, *troglydites* CASENT0096412. doi:10.1371/journal.pone.0001787.g011