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Mamoru Terayama and Toshiyuki Satoh

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Camponotus (*Myrmamblys*) *ogasawarensis* sp. nov. from the Ogasawara Islands, Japan (Insecta, Hymenoptera, Formicidae)

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Abstract. *Camponotus* (*Myrmamblys*) *ogasawarensis* sp. nov. is described and illustrated from the Ogasawara Islands, Japan.

In the course of our recent study of the Japanese Formicidae, we discovered an undescribed species of the genus *Camponotus* Mayr, 1861, from the Ogasawara Islands (Bonin Islands), southern Japan. In the present paper, descriptions are given on the workers, female, and male castes with illustrations. Measurements, indices and their abbreviations used in this paper are the same as Terayama & Satoh (1990).

Description

Camponotus (*Myrmamblys*) *ogasawarensis* sp. nov.

Minor worker. Head length (HL) 0.93–1.03 mm; head width (HW) 0.85–0.90 mm; scape length (SL) 0.98–1.10 mm; cephalic index (CI: HW×100/HL) 87–89; scape index (SI: SL×100/HW) 118–122; Weber's length of alitrunk (WL) 1.28–1.58 mm; dorsal alitruncal width (AW) 0.65–0.75 mm; alitruncal width index (AI: AW×100/WL) 48–54; petiolar scale length (PSL) 0.14–0.18 mm; petiolar scale height (PSH) 0.20–0.24 mm; dorsal petiolar scale width (DSW) 0.28–0.33 mm; scale index (SCI: PSL×100/PSH) 67–74; scale width index (SWI: DSW×100/AW) 41–46; total length (TL) 3.7–4.0 mm.

Head (Fig. 1) longer than wide, with convex sides and occipital border in frontal view. Mandibles (Fig. 9) with five distinct teeth; basal most of masticatory margin angulate. Clypeus convex anteriorly. Eyes weakly prominent and convex, 0.25 mm in maximum diameter. Antennae long and slender; scape projecting beyond the occipital border by about 2/5 of their length.

Alitrunk (Fig. 2) in profile with slightly convex mesonotal dorsum and concave propodeal dorsum. In lateral view, posterodorsal corner of propodeum rounded, not forming an angle. Petiolar scale (Figs. 5, 6) thick and short; in dorsal view, 1.6–1.8 times as broad as long.

Head with erect hairs; pronotum and mesonotum each with a pair, dorsum of propodeum with 5–6 pairs, posterolateral borders of propodeum with 3–4 pairs and petiolar scale with 3 pairs of erect hairs; gastric tergites each with suberect hairs.

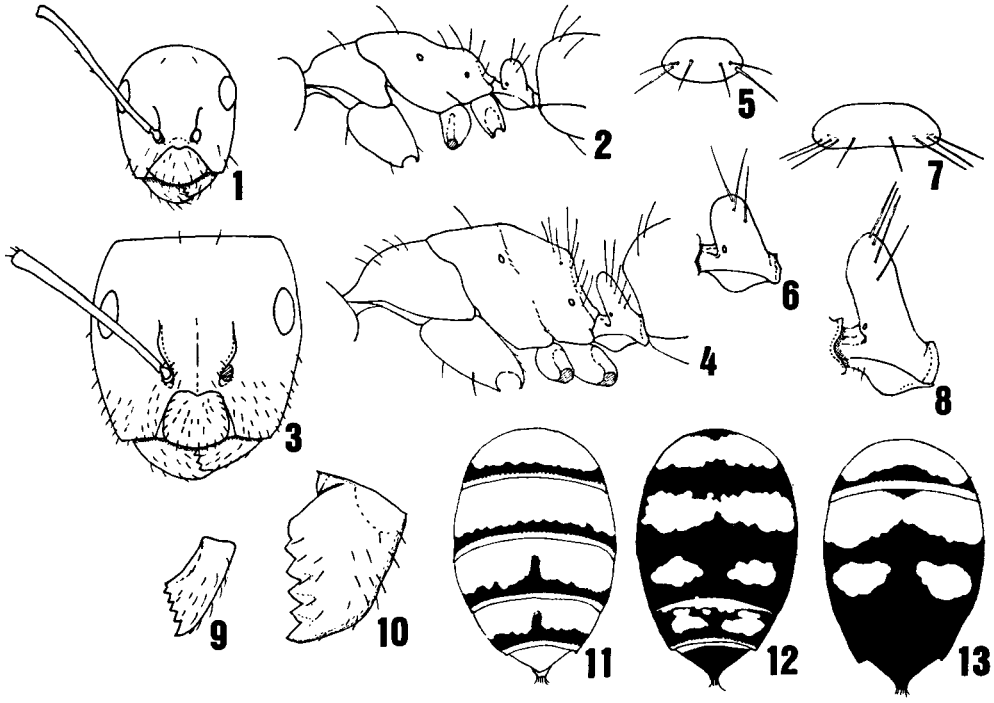
Alitrunk, petiole and legs yellow, head including antennae and mandibles slightly darker. Ground color of gaster black; 1st to 3rd gastric tergites each with two large yellow spots or a broad yellow band; 4th tergite with two yellow spots, sometimes lack of them; 5th tergite black or yellow.

Major worker. HL 1.40–1.53 mm; HW 1.35–1.48 mm; SL 0.98–1.18 mm; CI 95–97; SI 72–80; WL 1.68–1.85 mm; AW 0.86–0.93 mm; AI 50–54; PSL 0.15–0.18 mm; PSH 0.33–0.36 mm; DSW 0.41–0.45 mm; SCI 46–54; SWI 47–49; TL 5.0–5.5 mm.

Head (Fig. 3) rectangular with weakly convex sides and straight occpital border in frontal view. Mandibles (Fig. 10) strong, with five distinct teeth; basal most of masticatory margin dully angulate. Anterior border of clypeus truncated, but weakly convex. Eyes 0.30 mm in maximum diameter. Antennal scapes slightly exceeding the occipital border of head.

Alitrunk (Fig. 4) massive, with almost straight mesonotal dorsum and propodeal dorsum; anterior border of propodeum forming an angle laterally. Petiolar scale (Figs. 7, 8) thin and long; in lateral view, lower half of anterior border parallel with posterior border, upper half of anterior border weakly convex; in dorsal view, 2.4–2.5 times as broad as long.

Head with moderately abundant erect or suberect hairs; short suberect hairs abundant on



Figs. 1–13. *Camponotus ogasawarensis* sp. nov. (minor and major workers).—1, Minor worker, head, frontal view; 2, minor worker, alitrunk and petiole, lateral view; 3, major worker, head, frontal view; 4, major worker, alitrunk and periole, lateral view; 5, minor worker, petiole, dorsal view; 6, minor worker, petiole, lateral view; 7, major worker, petiole, dorsal view; 8, major worker, petiole, lateral view; 9, minor worker, mandible; 10, major worker, mandible; 11–13, major worker, color patterns of gaster.

lower 2/5 of head and mandibles. Dorsum of pronotum with about 10 erect hairs; mesonotum with 1 or 2 pairs, dorsum of propodeum with 3–5 pairs, posterolateral borders of propodeum with 4 or 5 pairs and petiolar scale with 4–6 pairs of erect hairs; gaster with long suberect hairs.

Head including antennae and mandibles reddish brown to yellowish brown; alitrunk, petiole and legs yellow; dorsa of mesonotum and propodeum, petiolar scale, and upper 1/3 of fore coxae dark brown; eyes black; color patterns of gaster as in workers (Figs. 11–13).

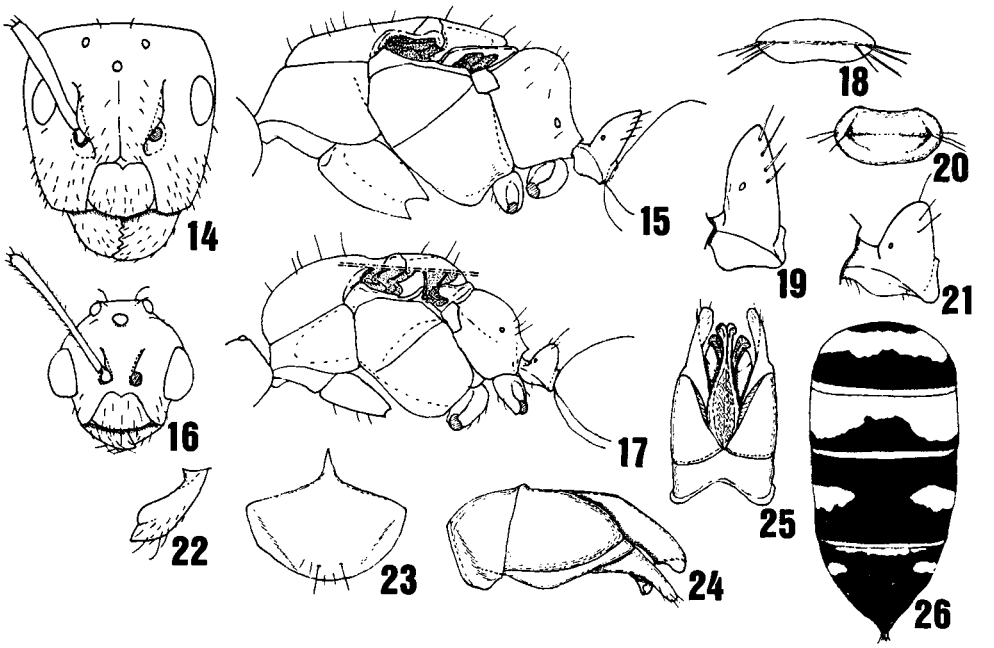
Female. HL 1.50–1.80 mm; HW 1.50–1.70 mm; SL 1.00–1.40 mm; CI 96–100; SI 67–80; WL 2.70–3.10 mm; AL 1.25–1.75 mm; AI 46–56; PSL 0.23–0.25 mm; PSH 0.45–0.60 mm; DSW 0.65–0.80 mm; SCI 42–50; SWI 44–52; TL 7.5–9.0 mm.

Head (Fig. 14) rectangular, with almost straight occipital border. Mandibles with rounded outer margin and five distinct teeth; basal most of masticatory margin angulate. Anterior border of clypeus truncated, weakly convex. Compound eyes 0.44–0.48 mm in maximum diameter; anteromedian ocellus 0.09 mm in diameter. Antennal scapes exceeding the occipital border of head.

General form of alitrunk and petiole shown as in Fig. 15. Petiolar scale (Fig. 19) long with dully angulate apex; in frontal view, dorsal border almost straight.

Erect hairs moderately abundant on head, dorsum of alitrunk, petiole and gaster; short suberect hairs abundant on lower 2/5 of head and mandibles.

Head including antennae and mandibles reddish brown; alitrunk and petiole dark brown but pronotum reddish brown; eyes black; legs yellow. Ground color of gaster dark brown; 1st and 2nd tergites each with a long yellowish brown band; 3rd and 4th tergites each with two yellowish brown spots.



Figs. 14–26. *Camponotus ogasawarensis* sp. nov. (female and male).—14, Female, head, frontal view; 15, female, alitrunk and petiole, lateral view; 16, male, head, frontal view; 17, male, alitrunk and petiole; 18, female, petiole, dorsal view; 19, female, petiole, lateral view; 20, male, petiole, dorsal view; 21, male, petiole, lateral view; 22, male, mandible; 23, male, subgenital plate; 24, male, genitalia, lateral view; 25, male, genitalia, dorsal view; 26, female, color pattern of gaster.

Male. HL 0.88–0.90 mm; HW 0.93–0.99 mm; SL 0.93–0.98 mm; CI 106–111; SI 100–101; WL 2.05–2.10 mm; AW 1.05–1.13 mm; AI 51–55; PSL 0.20–0.23 mm; PSH 0.25–0.28 mm; DSW 0.35–0.40 mm; SCI 80–82; SWI 31–35; TL 4.8–5.3 mm. Head (Fig. 16) including eyes slightly broader than long, with straight occipital border and rounded dorsolateral borders. Mandibles (Fig. 22) with only one dull apical tooth. Anterior clypeal border weakly convex. Compound eyes prominent and convex, 0.38 mm in maximum diameter; anteromedian ocellus 0.10 mm in diameter.

Alitrunk and petiole as in Fig. 17. Petiolar scale (Figs. 20, 21) thick and low; in frontal view, dorsal border almost straight, but weakly concave. concave. Subgenital plate (Fig. 23) hemi-circular, with median basal stalk. Genitalia as in Figs. 24 and 25; in lateral view, anterior half of parameres with parallel sides, reaching the tip of aedeagus.

Erect hairs sparsely present on head, alitrunk, petiole and gaster. Color black.

Holotype. Minor worker, Kanaimisaki, Ani-jima Is., 31-III-1990, K. Tomiyama leg.

Paratypes. Ani-jima Is.: 15 minor workers, 5 major workers, 2 alate females, 3 males, from the same nest as holotype; 2 minor workers, 4 males, 4-VII-1989, K. Tomiyama leg.; 11 minor workers, 9 major workers, 5-III-1986, T. Satoh leg.; 2 females, 1 minor worker, 21-VII-1990, K. Tomiyama leg. Chichi-jima Is.: 5 minor workers, 3 major workers, 2-III-1986, T. Satoh leg.; 8 minor workers, 3 major workers, 4-III-1986, T. Satoh leg.; 2 minor workers, 12 major workers, 6-III-1986, T. Satoh leg.; 3 minor workers, 3 major workers, 8-III-1986, T. Satoh leg.; 3 minor workers, 2 major workers, 12-XI-1780, K. Masuko leg.; 3 minor workers, 1 female, 5～7-VII-1970, T. Habe leg. Haha-jima Is.: 4 minor workers, 30-VI～4-VII-1970, T. Habe leg.; 3 females, 21-VI-1976, Y. Kurosawa leg.; 1 minor worker, 27-VI-1987, R. Nishimura leg. Otouto-jima Is.: 1 major worker, 1 minor worker, 18-VI-1990, K. Tomiyama leg.; 1 major worker, 2 minor workers, 20-VII-1990, K. Tomiyama leg. Muko-

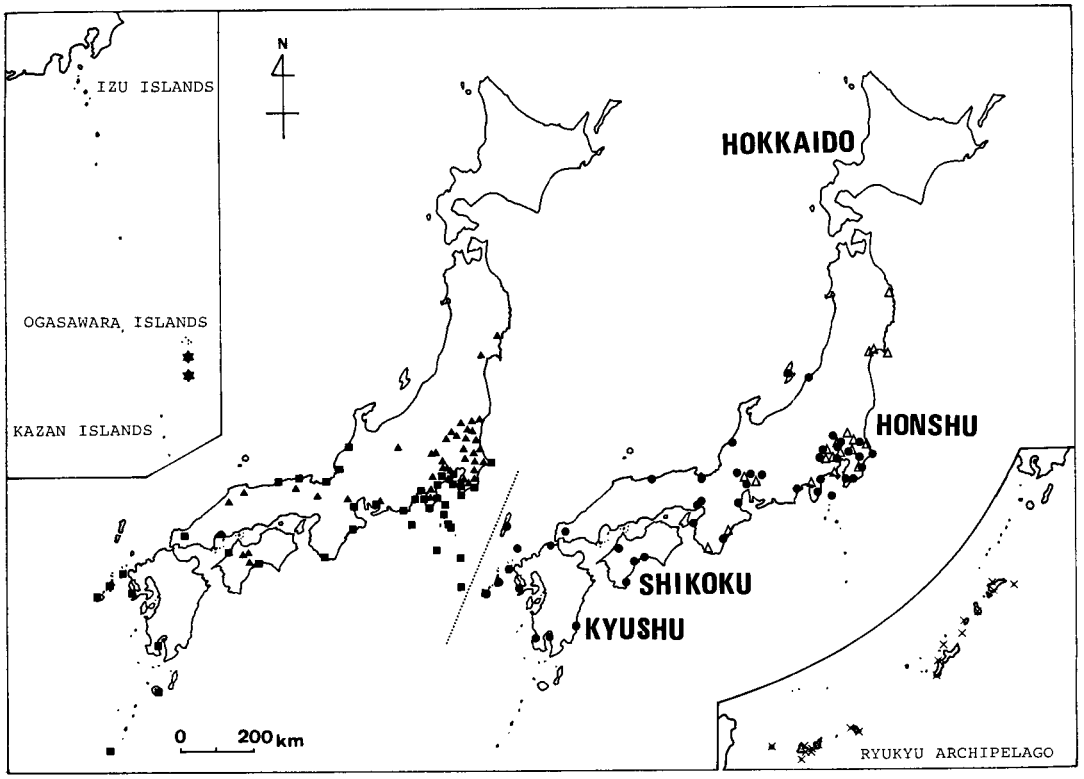


Fig. 27. Geographical distributions of six Japanese species belonging to the subgenus *Myrmamblys* of *Camponotus*.
✱: *C. ogasawarensis* sp. nov., ▲: *C. yamaokai* Terayama & Satoh, ■: *C. nawai* Ito, ●: *C. tokioensis* Ito, △: *C. itoi* Forel, ×: *C. sp.* "Senaga-umematsu-ôari".

jima Is.: 1 female, 1 major worker, 19-VII-1970, K. Tomiyama leg.

Type depository. The holotype and some paratypes are deposited in the National Institute of Agro-Environmental Sciences, Tsukuba, and the other paratypes in the National Science Museum, Tokyo, the Osaka Museum of Natural History, and the Naturhistrisches Museum, Basel.

Distribution. Restricted to the Ogasawara Islands.

Remarks. The present species is arboreal, nesting in dead twig of standing trees in woodland. The distribution of six Japanese species belonging to the subgenus *Myrmamblys* of *Camponotus* are shown in Fig. 27.

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Reference

Terayama, M. & T. Satoh, 1990. A new species of the genus *Camponotus* from Japan, with notes on two known forms of the subgenus *Myrmamblys* (Hymenoptera, Formicidae). Jpn. J. Ent., 58: 405–414.

(Terayama, M.: Biological Laboratory, Toho Institute of Education. Chofu, Tokyo, 182 Japan. T. Satoh: Institute of Biological Sciences, University of Tsukuba. Tsukuba, Ibaraki, 305 Japan)

小笠原諸島から得られたオオアリ属の1新種 *Camponotus* (*Myrmamblys*) *ogasawarensis* sp. nov. (昆虫綱, ハチ目, アリ科)

寺山　守・佐藤俊幸

小笠原諸島の兄島，父島，母島，弟島，聟島から得られたオオアリ属の1新種，*Camponotus ogasawarensis* (和名：オガサワラオオアリ) を記載した．本種は *Myrmamblys* 亜属に属し，樹林内の立木の枯枝等に巣を作る樹上営巣性種である．職蟻，兵蟻は頭部，胸部，腹柄節が黄色，腹部は黒の地色で，腹節第1背板から第3背板まではそれぞれ黄色の2紋か幅広い黄色のバンドを持ち，第4背板も黄色の2紋を持つ場合が多い．女王は頭部が黄褐色，胸部と腹柄節は暗褐色，腹部は暗褐色の地色で，腹節第1，第2背板にはそれぞれ幅広い黄褐色のバンドを持ち，第3，第4背板はそれぞれ1対の黄褐色の紋を通常持つ．また，本種も含めて日本産の *Myrmamblys* 亜属6種の分布図も提供した．

(寺山　守：182 調布市若葉町 1-41-1　桐朋学園桐朋教育研究所生物研究室．佐藤俊幸：　305 つくば市天王台 1-1-1　筑波大学生物科学研究科)