

Shan, 1020 m a.s.l., 19.IX.1998, DYS-108, leg. J. Fel-
lowes, 2 workers; non-type material: northern Vietnam,
Lai Chau province, western slopes Mt. Fan Si Pan, (W.
Cong Troi), 2100 - 2200 m a.s.l., 29.IV. - 6.V.2002, Nos.
Eg02-VN-179, 313, 315, leg. K. Eguchi, 45 workers (from
several nests); northern Vietnam, Cong Troi, Sa Pa dis-
trict, Lao Cai province, 28.IV. - 5.V.2002, 2000 - 2200 m
a.s.l., Nos. Eg02-VN-159, 183, 253, 308, 311, leg. K.
Eguchi, 103 workers, 1 queen (from several nests).

Queen (first description, Figs. 11 - 15). Head longer
than broad, with slightly convex sides and almost straight
posterior margin, and rounded occipital corners; its upper
latero-ventral corners pointed. Anterior clypeal margin
slightly convex, notched medially. Frontal carinae very
feebly curved, frons wide. Antennal sockets surrounded
by rugae. Antennal scape longer than head, sharply curved
at the base. Mandibles with 7 - 8 teeth.

Alitrunk relatively long, scutum and scutellum very
weakly convex. Metapleural lobes projecting apically and
forming sharp tooth. Propodeal spines very long, acute,
strongly curved downwards in its apical third. Petiole rela-
tively short and quite high (distinctly shorter than in
workers). Postpetiole quite high, subequal to its length,
with more or less straight anterior surface and rounded node
dorsum, fig-shaped seen from above. Spurs on middle and
hind tibiae well developed and distinctly pectinate.

Whole body with coarse sculpture. Frons between
frontal carinae level with the eyes, with no less than six
rugae. Upper (rear) third of head dorsum with coarse
reticulation. Clypeus with coarse longitudinal rugae, man-
dibles coarsely striated while frontal triangle smooth and
shiny. Scutum and scutellum with coarse sinuous rugae
and reticulation. Sides of alitrunk with sinuous rugae.
Petiolar and postpetiolar nodes with coarse sinuous rugae
and reticulation. Surface of head, alitrunk and waist be-
tween rugae not punctated, smooth and shiny. Gaster
smooth and shiny.

Occipital and lateral margins of head with very long
outstanding hairs; alitrunk with similar hairs. Antennal
scape and tibiae with numerous long subdecumbent hairs;
upper margin of scape with suberect hairs. Body dark
brown, with antennae and legs somewhat lighter.

Measurements (mm) and indices of queen (n = 1): HL
1.64, HW 1.44, FW 0.57, FLW 0.60, SL 1.79, AL 2.81,
AH 1.71, SCW 1.40, SCL 1.97, HTL 1.65, PL 0.87, PW
0.46, PH 0.53, PPL 0.71, PPW 0.73, PPH 0.78, ESL
0.70, ESD 0.73.

CI 1.14, FI 0.39, FLI 1.06, SI₁ 1.09, SI₂ 1.24, PI₁
1.63, PI₂ 0.60, PPI₁ 0.91, PPI₂ 1.06, PPI₃ 1.58, PPI₄ 0.50,
ESLI 0.49, ESDI 1.04, AI 1.65, SCI 1.41.

Taxonomic notes. *Myrmica angulata* differs from
other Vietnamese *Myrmica* species first of all in a scape
that is strongly angled at the base. Additionally, it differs
from *M. titanica* in a much smaller size (HL < 1.50, AL
< 2.45 vs. HL > 2.10 AL > 3.30 mm). From *M. serica* it
differs in well developed coarse reticulation on the head
dorsum and in the sculpture of waist, which surface be-
tween rugae densely punctated; from *M. yamanei* and *M.*
draco it differs in the absence of punctures on the head
dorsum (for differences from *M. schoedli* sp.n. see above;
for other details see RADCHENKO & al. 2001).

Bionomics. In southern China nests of *M. angulata*
were found in rotten wood in forests at altitudes of 500 -

1000 m a.s.l. In northern Vietnam it also lives in mixed
forests between 1700 and 2200 m a.s.l., nests being
found in rotten wood, in soil under logs and barks, or
under stones. In this respect it resembles *M. serica* and we
might speculate that it occupies a similar niche. The alti-
tude difference between China and Vietnam is undoubt-
edly due to regional climatic differences (note that *M.*
serica also lives at somewhat lower altitudes in China).

**Key for identification of *Myrmica* species from Vietnam
(workers)**

- 1 Body extremely large, HL > 2.10 mm, AL >
3.30 mm. Posterior (rear) half of head dorsum
with coarse reticulation, remainder parts of
head with coarse longitudinal rugae (Fig. 16).
Alitrunk and waist with coarse reticulation, sur-
face between reticules on waist densely punc-
tated (Fig. 17). *M. titanica*
- Body much smaller, HL < 1.60 mm, AL <
2.50 mm. Body with other combinations of
type of sculpture (Figs. 1, 18, 20, 22). 2
- 2 Head dorsum coarsely rugose and surface be-
tween rugae smooth, not punctated (Figs. 18,
20). 3
- Head dorsum rugose or rugulose and surface
between rugae distinctly punctated (Figs. 1, 22). 4
- 3 Head dorsum with coarse sinuous longitudinal
rugae, reticulation may be present, but only on
the occiput (Fig. 18). Petiole and postpetiole
coarsely rugose and surfaces between the ru-
gae smooth and shiny (Fig. 19). *M. serica*
- Frons with coarse sinuous longitudinal rugae
and posterior (rear) third of head dorsum with
coarse reticulation (Fig. 20). Petiole and post-
petiole coarsely rugose and reticulate and sur-
face between rugae densely punctated (Fig.
23). *M. angulata*
- 4 Head dorsum with fine, slightly sinuous longi-
tudinal rugae, without reticulation, surface
between rugae finely though obviously, super-
ficially punctated, appearing more or less shiny
(Fig. 1). Petiole and postpetiole without rugae,
only partly finely striated and finely punc-
tated, appearing somewhat dull (Figs. 3, 4).
Scape very long, SI₁ > 1.23, SI₂ > 1.45.
..... *M. schoedli* sp.n.
- Only frons with coarse longitudinal rugae, post-
erior (rear) part of head dorsum with coarse re-
ticulation, surface between rugae densely punc-
tated, appearing dull (Fig. 22). Petiole and post-
petiole with coarse rugae and densely punctat-
ed, appearing dull (Fig. 23). Scape shorter, SI₁
< 1.18, SI₂ < 1.38. *M. yamanei*

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