



HOKKAIDO UNIVERSITY

Title	A CONTRIBUTION TO THE KNOWLEDGE OF MEDETERA OF JAPAN (DIPTERA : DOLICHOPODIDAE)
Author(s)	Negrobov, O. P.
Citation	Insecta matsumurana. Supplement, 9, 1-7
Issue Date	1970-12
Doc URL	https://hdl.handle.net/2115/22237
Type	departmental bulletin paper
File Information	9_P1-7.pdf



A CONTRIBUTION TO THE KNOWLEDGE OF MEDETERA OF JAPAN

(DIPTERA : DOLICHOPODIDAE)

By O. P. NEGROBOV

Zoological Institute, Academy of Sciences of USSR
and Faculty of Biological-Soil Sciences
of Voronezh University

The specimens used in this paper were collected by Dr. S. Takagi. Specimens from the collection of the Zoological Institute, Academy of Sciences of USSR, and those collected by Dr. N. P. Krivoscheina and Dr. B. M. Mamajev were also used. The author expresses his sincere gratitude to Prof. C. Watanabe and Dr. S. Takagi for their kindness in reading this manuscript. He is also grateful to Dr. S. Takagi, Dr. N. P. Krivoscheina and Dr. B. M. Mamajev for their kindness in giving material at the author's disposal. The holotypes are preserved in the collection of the Entomological Institute, Hokkaido University [HU], or that of the Zoological Institute, Academy of Sciences of USSR [AS].

1. *Medetera signaticornis* (Loew, 1857)
1 ♂, Aizan-Kei, Hokkaido, 16. 7. 1960 (S. Takagi).
2. *Medetera borealis* Thunberg, 1955
1 ♂, Daisetu-zan, Hokkaido, 13. 7. 1960 (S. Takagi).
3. *Medetera dichrocera* Kowarz, 1877
1 ♂, 1 ♀, Aizan-Kei, Hokkaido, 16. 7. 1960 (S. Takagi); 1 ♂, Daisetu-zan, Hokkaido, 14. 7. 1960 (S. Takagi).
4. *Medetera penicillata*, sp. n. [Fig. 1, 2, 11, 17]

Male. Front black green, slightly dusted brownish. Face green with bluish reflections sometimes dusted on epistomal edges. Epistoma shining, with small furrows. Clypeus metallic green brilliant, slightly dotted. First and 2nd antennal joints yellow, the 3rd black, longer than its depth at base, with a small hollow at base of arista. Arista preapical, as long as distance between base of antennae and lower edge of palpi. Postocular cilia black. Thorax dark green with blackish reflections, dusted brownish. Mesonotum with black bristles. Three-5 propleural bristles approximately of the same length. Five-6 pairs of dorsocentral bristles backwards from on suture, robust bristles lacking before suture, the posteriors noticeably longer. Acrostichal bristles well developed, the posteriors as long as or shorter than distance between acrostichal rows. Scutellum with 4 bristles. Legs black, with black bristles. Front femora without bristles below. Middle femora with short anteroventral bristles. Hind femora near base with long anterodorsal bristles. Middle tibiae with a pair of antero- and posterodorsal bristles near base. Proportion of hind tarsal joints I/II as 4.5/5.5.

Wings pale brown, hyaline. Apical section of M_{1+2} curved, shorter than the preceding section. Apical section of M_{3+4} approximately as long as outer crossvein. Halteres dusky yellow, with brown base and apex. Abdomen black, brilliant, with bluish green reflections, with black hairs. Sixth and 7th tergites with long ventral bristles, which are half as long as the 7th tergite. Hypopygium moderate in size. Hypandrium enlarged near apex. Cerci on dorsal side with long pale bristles attaining apex of cerci. Phallus with an oval dilation near apex (clearly visible ventrally or dorsally), at apex bent ventrally and dilated (in lateral view).

Female. Similar to male, with face wider and 3rd antennal joint shorter.

Length 3.0–4.5 mm., wing length 4.8–5.3 mm.

Holotype. ♂, Suputinsk Reserve, Primorje Territory, reared on the 3rd of February, 1965 (Krivoscheina) [AS].

Paratypes. 1 ♂, 2 ♀♀, same data as the holotype; 1 ♂, Aizan-Kei, Hokkaido, 15. 7. 1960 (K. Kamijo); 5 ♂♂, 2 ♀♀, Aizan-Kei, 15–16. 7. 1960 (S. Takagi); 1 ♂, Siza, Primorje Territory, 5. 6. 1927 (Stackelberg); 5 ♂♂, 3 ♀♀, Kedrovaja Reserve, Primorje Territory, 8. 5. 1967 (Krivoscheina); 2 ♂♂, Primorje Territory, Suputinsk Reserve, 17. 9. 1964 (Krivoscheina); 2 ♂♂, 2 ♀♀, Suputinsk Reserve, 26. 4. 1967 (Mamajev); 6 ♂♂, 1 ♀, Suputinsk Reserve, 15. 4. 1969 (Krivoscheina).

This species is close to *M. dichrocer* Kow., differing from the latter by the following characters: halteres with brown apex; male—3rd antennal joint only a little longer than deep at the base (in *dichrocer* 1.5 times as long as deep), cerci with a clump of long bristles, the length of the bristles exceeding the distance between the bristles and the apex of cerci; female—3rd antennal joint shorter than deep (in *dichrocer* longer than deep).

5. *Medetera japonica*, sp. n. [Fig. 3, 4, 5, 12]

Male. Front dark green, dusted brownish grey. Face brilliant green, dusted greyish on sides, brownish just above clypeus. Clypeus with bluish reflections, half as high as epistoma. First and 2nd antennal joints yellow, the 3rd brown, crossoval, shorter than its depth at base. Arista preapical, as long as face. Palpi big and black. Postocular cilia white below, several cilia near proboscis brown. Thorax shining green, dusted greyish, with 3 pale brown longitudinal stripes. Three–5 black propleural bristles approximately of the same length. Mesonotum with black bristles. Five robust dorsocentral bristles, the anteriormost is found before the suture, the posterior 2 noticeably longer. Scutellum with 4 bristles. Legs black with black bristles. Proportion of front tibia and tarsus as 6.4/8.4. Middle tibiae at base with 1 antero- and 1 posterodorsal bristles. Hind femora at base with long anterodorsal bristles. Proportion of hind tarsal joints I/II as 2.8/4.3. Wings hyaline. R_{4+5} and M_{1+2} converging. Apical section of M_{1+2} scarcely curved, a little longer than or as long as the basal section. Apical section of M_{3+4} longer than outer crossvein. Squamulae dusky yellow with brown margins and yellow cilia. Halteres blackish brown. Abdomen short, metallic shining, bluish black, with black cilia. Hypopygium small. Hypandrium wide, short, at apex with lobi. Phallus near apex enlarged, with a symmetrical, wedge-like appendix dorsally.

Female. Similar to male.

Length 2.9–3.2 mm., wing length 3.3–3.8 mm.

Holotype. ♂, Aizan-Kei, Hokkaido, 15. 7. 1960 (S. Takagi) [HU]. Paratypes. 1 ♂, 6 ♀♀, same data as the holotype; 1 ♂, Daisetuzan, Hokkaido, 13. 7. 1960 (S. Takagi).

This species is close to *M. setiventris* Thunb., from which it is distinguished by the structure of the genitalia.

6. *Medetera occultans*, sp. n. [Fig. 6, 7, 8, 13, 14, 18]

Male. Front green, dusted greyish-white. Face green, metallic brilliant, dusted greyish near transverse suture, under antennae and on sides of epistoma. Second and 3rd antennal joints dark brown, the 1st yellow, the 3rd as deep as or deeper than long. Arista almost apical, its length equal to height of face. Palpi green. Lower postocular cilia yellow, a few near proboscis brown. Thorax metallic shining, black with bluish reflections, densely dusted greyish. Bristles of thorax black. Four-6 robust propleural bristles equal in length. Dorsocentral bristles becoming noticeably longer from the anterior to the posterior, robust bristles lacking before suture. Acrostichal bristles well developed, the posteriors longer than distance between acrostichal rows. Two supraalar bristles. Scutellum with 4 bristles. Legs black, with black bristles, trochanters and knees brownish. Front femora with very short bristles. Middle femora with short anteroventral bristles. Middle tibiae with 2 bristles above near base. Hind femora with many long anterodorsal bristles. Hind tibiae with some long yellow bristles above towards apex, the longest of the bristles is longer than the diameter of the segment. Proportion of hind tarsal joint I/II as 3.6/5.6. Wings hyaline. Apical section of M_{1+2} curved, a little longer than the preceding section. Apical section of M_{3+4} shorter than outer crossvein. Halteres pale yellow, with base dark and apex a little dark. Abdomen black with a little of green reflections. Hypopygium wide, with 2 asymmetrical close-fitting lamellae on each side. Cerci big, dark, with a few bristles. Phallus with a dilation in middle part (in ventral view), almost straight (in lateral view), its end bent to ventral side.

Female. Arista apical. Face twice as wide as depth of 3rd antennal joint. Otherwise as in male.

Length 4.0-4.5 mm., wing length 4.0-5.0 mm.

Holotype. ♂, Daisetuzan, Hokkaido, 14. 7. 1960 (S. Takagi) [HU]. Paratypes. 1 ♀, Daisetuzan, 13. 7. 1960 (S. Takagi).

This species is close to *M. obscura* (Zett.), from which it is distinguished by the shorter anteroventral bristles of the middle femora and the almost straight hypandrium and phallus. The female is distinguished by the 8th abdominal segment sclerotized.

7. *Medetera takagii*, sp. n. [Fig. 9, 10, 15, 16, 19]

Male. Front black, densely dusted brownish. Face black with green reflections, dusted brownish near transverse suture and under antennae, with granular shagreen. Antennae black; 3rd joint with arista dorsal, its length nearly equal to its depth near base. Length of arista equal to distance between base of antennae and lower edge of head. Postocular cilia black. Thorax metallic shining, dusted brownish. Two-3 long, black propleural bristles, lower of them longer. Five-6 pairs of robust dorsocentral bristles noticeably longer from the anterior to the posterior, 1-2 anteriormost pairs being found before suture. Acrostichal bristles well developed, 2 pairs behind the line connecting the sutural bristles. Two supraalar bristles. Front femora on apical 1/3 with long anteroventral bristles. Middle femora with anteroventral bristles longer

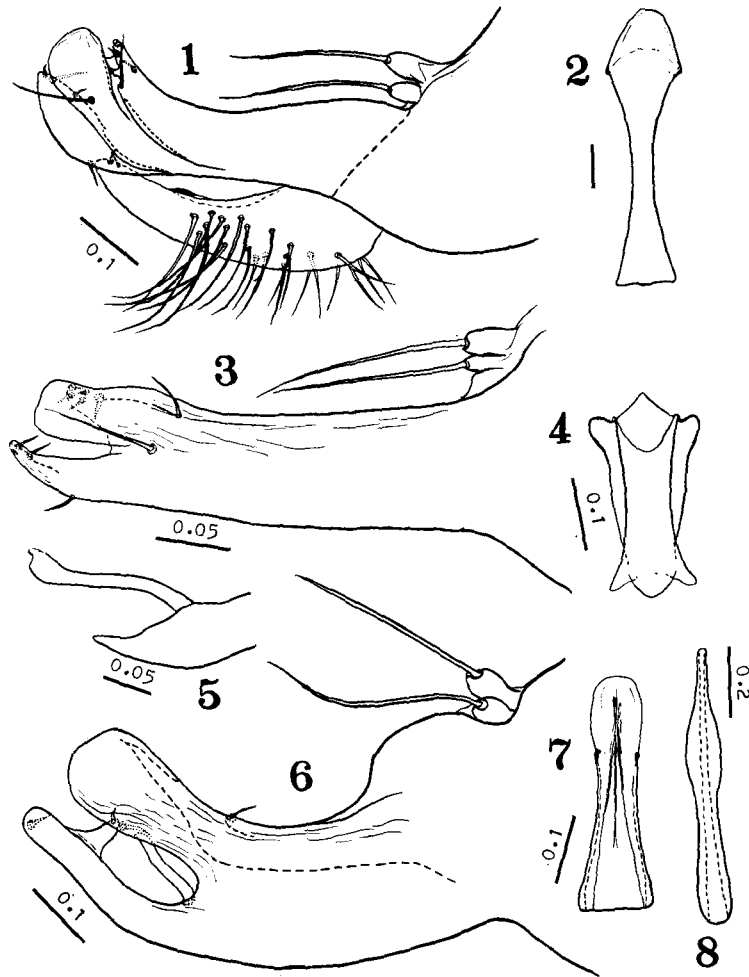


Fig. 1 & 2, *M. penicillata* (paratype): 1, end of hypopygium, lateral view; 2, hypandrium, ventral view. **Fig. 3-5, *M. japonica* (paratype):** 3, end of hypopygium, lateral view; 4, hypandrium, ventral view; 5, end of phallus, lateral view. **Fig. 6-8, *M. occultans* (holotype):** 6, end of hypopygium, lateral view; 7, hypandrium, ventral view; 8, phallus, ventral view.

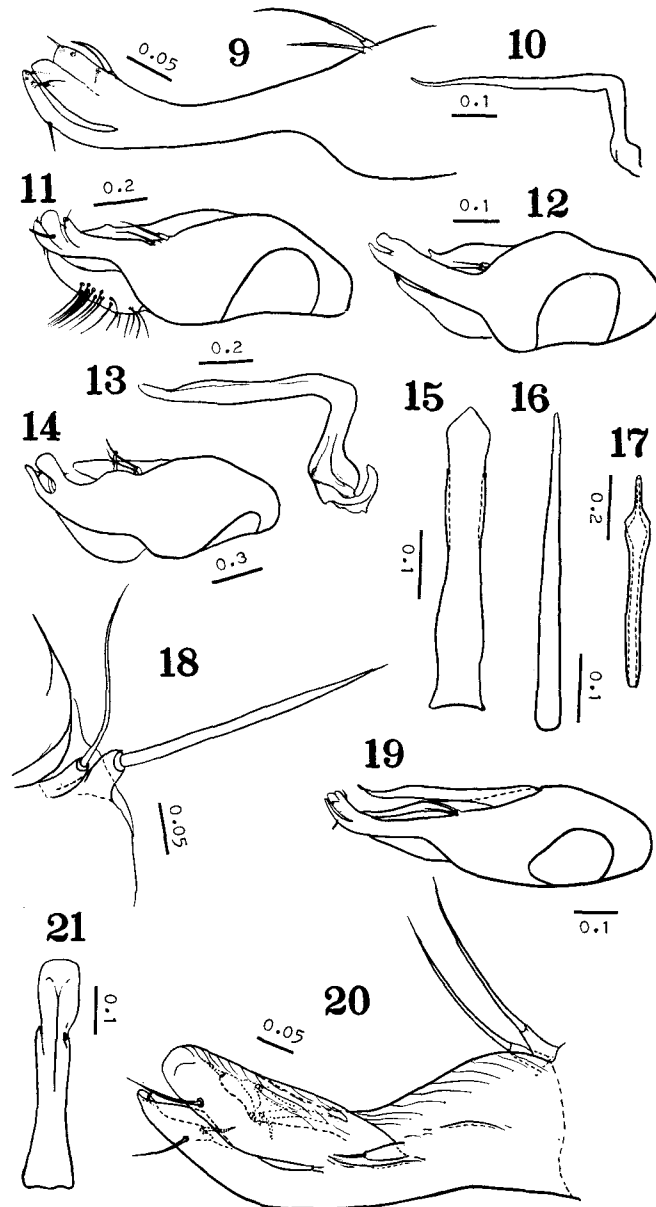


Fig. 9 & 10, *M. takagii* (paratype): 9, end of hypopygium, lateral view; 10, phallus, lateral view. **Fig. 11, *M. penicillata*** (paratype): hypopygium, lateral view. **Fig. 12, *M. japonica*** (paratype): hypopygium, lateral view. **Fig. 13 & 14, *M. occultans*** (holotype): 13, phallus, lateral view; 14, hypopygium, lateral view. **Fig. 15 & 16, *M. takagii*** (paratype): 15, hypandrium, ventral view; 16, phallus, ventral view. **Fig. 17, *M. penicillata*** (paratype): phallus, ventral view. **Fig. 18, *M. occultans*** (holotype): middle part of hypopygium, ventral view. **Fig. 19, *M. takagii*** (paratype): hypopygium, lateral view. **Fig. 20 & 21, *M. ravidata*** (paratype): 20, end of hypopygium; 21, hypandrium.

towards apex. Middle tibiae with 2 bristles above near base. Hind femora with long anterodorsal bristles near base, long frontal bristles on apical 1/2, and long anteroventral bristles on apical 1/3. Hind tibiae with long bristles above near apex. Proportion of hind tarsal joints I/II as 1.6/2.8. Wings hyaline. R_{4+5} and M_{1+2} at apex of wing converging. Proportion of basal and apical sections of M_{1+2} as 7.5/8.5. Apical section of M_{1+2} twice as long as outer crossvein. Squamulae yellow, with a brown fringe and brown cilia. Halteres blackish brown. Abdomen green, dusted greyish brown, with brownish black bristles. Hypopygium not particularly enlarged. Hypandrium almost band-like (in ventral view), bent (in lateral view), with nearly parallel edges, only near apex rather slightly dilated.

Female. With face wider.

Length 2.1–2.6 mm., wing length 2.7–3.0 mm.

Holotype. ♂, Sôun-Kyô, Hokkaido, 16. 7. 1960 (S. Takagi) [HU]. Paratypes. 2 ♂♂, 2 ♀♀, Sôun-Kyô, 13–16. 7. 1960; 3 ♂♂, 3 ♀♀, Daisetuzan, Hokkaido, 13. 7. 1960 (S. Takagi).

This species is close to *M. tristis* (Zett.), from which it differs by the structure of the phallus.

8. *Medetera ravid*a, sp. n. [Fig. 20, 21]

Male. Front metallic green, brilliant, dusted grey. Face narrow, metallic brilliant, bright green, with bluish reflections, dusted greyish white on sides, under antennae and near suture. Epistoma 1.5 times as high as clypeus. Clypeus dotted, twice as high as wide. First and 2nd antennal joints yellow, the 3rd black, crossoval, much shorter than deep. Arista preapical, brown, as long as distance between antennae and lower edge of palpi. Palpi green, metallic brilliant, with brown bristles. Postocular bristles white. Thorax metallic brilliant green, densely dusted whitish grey. Propleura with 2–4 white bristles approximately equal in length. Robust dorsocentral bristles well developed behind suture, becoming noticeably longer posteriorly. Three pairs of acrostichal bristles behind line connecting sutural bristles, the posteriormost bristle exceeding distance between the rows. More than 25–30 bristles between humeral callus and dorsocentral row of bristles. Two notopleural and 2 supraalar bristles. Scutellum with 4 bristles. Wings hyaline with brown veins. Section of costal vein between R_{2+3} and R_{3+4} and that between R_{3+4} and M_{1+2} as 2.3/0.6. Apical section of M_{1+2} almost straight or slightly curved, proportion of basal and apical sections of M_{1+2} as 9.0/11.4. Apical section of M_{3+4} and outer crossvein as 2.4/1.3. Halteres pale yellow. Squamulae yellow, with margin slightly darkened. Cilia yellow. Coxae and femora greenish brown, knees, tibiae and tarsi yellow, the tarsi apically darkened. Fore coxae with white hairs. Fore femora with a row of long bristles on posterior side of apical 1/2. Middle femora with a row of long anteroventral bristles, which are well developed at the base of the segment, being longer than the diameter of the segment. Middle tibiae with 1 antero- and 1 posterodorsal bristles towards base. Hind femora at the base with long anterodorsal bristles. Hind tibiae with long bristles at apex above. Proportions of hind tarsal joints I/II as 2.5/5.2. Abdomen metallic green, brilliant, dusted whitish grey, with white hairs. Hypopygium large. Epandrium short, as long as gonopods. Gonopods large, at apex divided into dorsal and ventral lobes. At the base of the ventral lobe of the gonopods there is a finger-form appendix with a robust

bristle. Surstylus consisting of 2 bristles basally articulated with epandrium. Cerci short, with robust bristles and hairs on dorsal side. Hypandrium somewhat asymmetrical. Phallus wide, with a tooth apically.

Female. Face a little wider. Hind tibiae without long bristles apically.

Length 3.8-4.5 mm., wing length 4.2-4.8 mm.

Holotype. ♂, Suputinsk Reserve, Primorje Territory, 27. 4. 1964 (Krivoscheina) [AS]. Paratypes. 1 ♂, 1 ♀, same data as the holotype; 1 ♂, Majche near Schcotovo, Primorje Territory, 6. 6. 1927 (Stackelberg); 5 ♂♂, 5 ♀♀, Suputinsk Reserve, 10. 4. 1959 (Zinovjev); 1 ♂, Majche, 8. 5. 1927 (Stackelberg); 4 ♂♂, 6 ♀♀, Kiyosumi-yama, Tiba-ken, Honsyû, September to December, 1967, reared from curculionids under bark of pines (Y. Kishi); 1 ♂. Suputinsk Reserve, 27. 9. 1968 (Krivoscheina); 3 ♀♀, Suputinsk Reserve, 20. 4. 1967 (Mamajev); 2 ♂♂, Suputinsk Reserve, 23-24. 5. 1959.

Key to the species of *Medetera* in Japan

- 1 (6) Apical section of M_{3+4} more than 1.5 times as long as outer crossvein
- 2 (3) First antennal joint yellow. Propleural bristles approximately of the same length *M. ravida*, sp. n.
- 3 (2) Antennae black. Lower postocular bristles longer than upper ones
- 4 (5) Halteres yellow *M. borealis* Thunb.
- 5 (4) Halteres dark *M. takagii*, sp. n.
- 6 (1) Apical section of M_{3+4} less than 1.5 times as long as outer crossvein
- 7 (10) Lower postocular cilia dark
- 8 (9) Halteres dark apically. Third antennal joint a little longer (♂) or shorter (♀) than deep *M. penicillata*, sp. n.
- 9 (8) Halteres yellow. Third antennal joint 1.5 times as long as (♂) or a little longer than (♀) deep *M. dichrocer* Kow.
- 10 (7) Lower postocular cilia pale
- 11 (12) Hind femora with a row of long frontal bristles. Halteres yellow . . . *M. occultans*, sp. n.
- 12 (11) Hind femora without long frontal bristles. Halteres dark
- 13 (14) Hypandrium wide with large side lobi. Gonopods almost straight . . *M. japonica*, sp. n.
- 14 (13) Hypandrium narrow, dilated near apex. Gonopods bent to ventral side apically *M. signaticornis* (Lw.)