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A Taxonomic Revision of the *alticollis* Group of the Genus *Pidonia* (Coleoptera, Cerambycidae) from Japan and Its Adjacent Regions

Mikio KUBOKI

Laboratory of Entomology, Tokyo University of Agriculture,
Sakuragaoka, Setagaya-ku, Tokyo, 156 Japan

Synopsis The *alticollis* group of the genus *Pidonia* is revised. *Pidonia muneaka* from Honshu is synonymous with *P. discoidalis* PIC. *Pidonia muneaka* occurring in Shikoku and Kyushu is regarded as a distinct species. A new name, *neglecta* sp. nov., is proposed for this species. *Pidonia discoidalis shikokensis* is raised to specific rank. *Pidonia discoidalis amanoi* is transferred to the subspecies of *P. shikokensis* CHÛJÔ et HAYASHI. A key to the species of this group is presented.

The *alticollis* group of the lepturine genus *Pidonia* occurring in Japan and the Asian Continent has been studied mostly by KRAATZ (1879), PIC (1901), MATSUSHITA (1933), TAMANUKI (1942) and HAYASHI (1969). For a long time the classification of this group has been confused at the species level because of the presence of local and individual variation within respective species and of the morphological similarities of the species involved.

I have examined a number of specimens belonging to the *alticollis* group which had been collected in various parts of Japan. The main differences among the species are recognized in the combination of character states of the following structures: last sternite in male, male genital organ, pygidium in female, last segment of maxillary palpus in male. In this paper I am going to recognize four species of the *alticollis* group from Japan and the Asian Continent.

Before going further, I am indebted to Prof. M. HAYASHI, Osaka Jonan Women's Junior College and Mr. S. M. LEE, National Science Museum, Seoul, Korea, for their suggestions. I am also grateful to Messrs. M. AMANO of Kitakyushu, N. OHBAYASHI of Miura, K. SUZUKI of Fujisawa, S. TAKEDA of Ibaraki and S. TSUYUKI of Zushi for their kindness supplying me with the materials.

Key to the Species of the *alticollis* Group from Japan and the Asian Continent

1. Last sternite emarginate at apex.....(male) 2
— Last sternite rounded at apex.....(female) 5
2. In male genitalia lateral lobes with short terminal hairs and median lobe straight at apex 3
— In male genitalia lateral lobes with long terminal hairs and median lobe

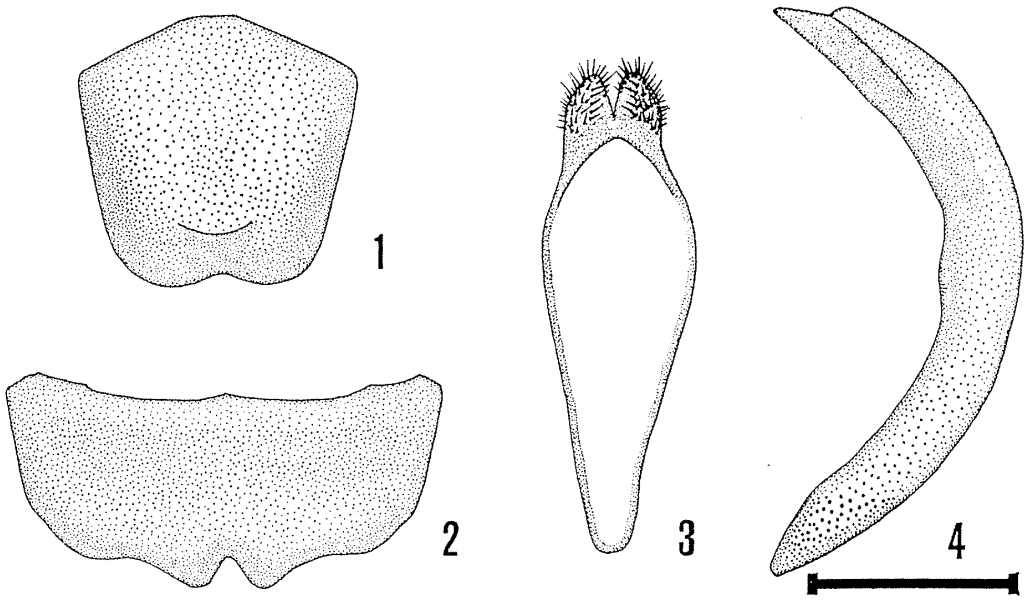
bending inwards at apex 4
3. Elytral apices truncate subroundly; Ussuri, Primorie, Korea.....
.....*P. alticollis* (KRAATZ)
— Elytral apices truncate; Japan (Kyushu, Shikoku) .....*P. neglecta* sp. nov.
4. Last segment of maxillary palpus with straight outer margin; basal margin of prothorax strongly bisinuate; Japan (Shikoku, Kyushu).....
.....*P. shikokensis* CHÛJÔ et HAYASHI
— Last segment of maxillary palpus with obtusely angulate outer margin; basal margin of prothorax weakly bisinuate; Japan (Honshu).....*P. discoidalis* PIC
5. Pygidium caudate, pointed at apex; Japan (Shikoku, Kyushu) .....
.....*P. shikokensis* CHÛJÔ et HAYASHI
— Pygidium rounded to emarginate at apex.....6
6. Elytral apices truncate subroundly; Ussuri, Primorie, Korea .....
.....*P. alticollis* (KRAATZ)
— Elytral apices truncate.....7
7. Apical margin of 8th sternite truncate; Japan (Kyushu, Shikoku).....
.....*P. neglecta* sp. nov.
— Apical margin of 8th sternite trilobed; Japan (Honshu).....*P. discoidalis* PIC

Pidonia (*Pidonia*) *alticollis* (KRAATZ)

(Figs. 1–4)

Grammoptera alticollis+var. *tristicula* +var. *maltinoides* KRAATZ, 1879, Dtsch. e. Z., **23**: 103, 104.
Pseudopidonia alticollis+*tristicula*+*maltinoides*: PIC, 1902, Mat. Longic., **4** (1): 25–27.
Pseudopidonia rubricollis PIC, 1931, Bull. Soc. ent. France, 1931: 257.
Pidonia (*Pseudopidonia*) *maltinoides*: SEKI, 1938, Ins. World, Gifu, **42**: 4.
Pidonia (*Pseudopidonia*) *alticollis*+*tristicula*: MITONO, 1940, Cat. Coleopt. Japon.: 24, 28.
Pidonia alticollis+*tristicula*: CHO, 1946, Bull. Zool. Sec. nat. Sci. Mus., **1**(3): 23, 24.
Pidonia (*Pidonia*) *alticollis*: HAYASHI, 1969, Bull. Osaka Jonan Women's Jr. Coll., **4**: 70, 71.

Male. Form elongate; integument black; pronotum red or black; elytra brownish yellow with black markings; mouthparts and appendages usually pale. Head densely punctate, thinly clothed with short appressed pubescence; clypeus coarsely and irregularly punctate; tempora with substiff pubescence, slightly narrowed posteriorly in anterior half and abruptly constricted in posterior half; last segment of maxillary palpus broadened apically with obtusely angulate outer margin; antennal tubercles strongly raised. Antennae long and slender, apical two segments beyond elytral apices; 1st segment finely punctate, thinly clothed with short appressed pubescence; 2nd longer than broad; 3rd longer than first two segments together; 4th shorter than 3rd, slightly shorter than 6th; 5th longest; 6th to 10th successively slightly shortened; 11th slightly longer than 10th. Prothorax longer than basal width, broadly constricted at base and apex; breadth across lateral prominent portions wider than base; basal margin weakly bisinuate, obviously broader than apical margin; sides obtusely prominent; disk of pronotum finely and densely



Figs. 1–4. *Pidonia alticollis* (KRAATZ), ♂. —— 1, Last tergite; 2, last sternite; 3, lateral lobes of male genitalia; 4, median lobe. Scale: 0.5 mm.

punctate except for a polished median impression extending from middle of disk to basal constriction, pubescence fine, thin and appressed; prosternum shining, thinly clothed with fine appressed pubescence. Elytra 2.68 times as long as basal width; sides straight; gradually narrowing posteriorly before curving to apices which are truncated subroundly; surface coarsely and deeply punctate; pubescence sparse, suberect and pale. Legs relatively slender, finely punctate, clothed with short pubescence which is subappressed on femora and suberect on tibiae and tarsi. Abdomen finely and densely punctate, densely clothed with appressed pale pubescence; last tergite emarginate at apex (Fig. 1); apical margin of last sternite bilobed, roundly emarginate at middle (Fig. 2). Genital organ moderately sclerotized, median lobe relatively slender, somewhat strongly curved ventrally, mucronately pointed at apex (Fig. 4); lateral lobes shorter than median lobe, apices produced with sparse short terminal hairs (Fig. 3). Length: 9.0–7.3 mm; width: 2.3–1.8 mm.

Female. More robust and more parallel-sided than in male; elytra 2.50 times as long as basal width; antennae barely attaining elytral apices; last tergite rounded at apical margin; last sternite rounded at apical margin. Length: 10.1–8.4 mm; width: 2.6–2.2 mm.

Specimens examined. 3 ♂♂, 2 ♀♀, Baekdam-sa (400–500 m in alt.), Mt. Seolag, Gangweon-do, 31. v. 1981, M. KUBOKI leg.; 3 ♂♂, 1 ♀, Mt. Odae, Gangweon-do, 23–24. vi. 1976, S. TAKEDA leg.; 2 ♂♂, 2 ♀♀, Mt. Taebaeg, Gangweon-do, 26–27. vi. 1976, S. TAKEDA leg.; 4 ♂♂, 2 ♀♀, Hibang-sa (750–850 m in alt.), Mt. Sobaeg, Gyeongsangbug-do, 4. vi. 1981, M. KUBOKI leg. I have also seen a pair of specimens from Eastern Siberia which were identified by N.

PLAVILSTSHIKOV.

Distribution. Ussuri, Primorie, Korea. New to the southern part of the Korean Peninsula.

Flight period. April to July.

Flower records. Cornus, Magnolia, Stephanandra, Actinidia, Lonicera, Syringa, Symplocos, Sorbus.

Pidonia (Pidonia) discoidalis PIC

(Figs. 5–8)

Pidonia grallatrix BATES v. *discoidalis* PIC, 1901, Bull. Mus. Hist. nat. Paris, **2**: 58 (The type of v. *discoidalis* is a female, after HAYASHI, 1969).
Pseudopidonia discoidalis: MATSUSHITA, 1933, J. Fac. Agr. Hokkaido Imp. Univ., **34**: 178, 189.
Pidonia (Pseudopidonia) discoidalis: MITONO, 1940, Cat. Coleopt. Japon.: 25
Pidonia (Pseudopidonia) discoidalis PIC f. *amagisanus* HAYASHI, 1953, Ent. Rev. Japan, **6**: 39
Pidonia (Pidonia) discoidalis PIC v. *yatsugatakensis* HAYASHI, 1969, Bull. Osaka Jonan Women's Jr. Coll., **4**: 74.
Pidonia (Pseudopidonia) discoidalis PIC ab. *muneaka* TAMANUKI, 1942, Fauna Nipponica, Tokyo, 10, Fasc. 8(15), Ceramb. 2: 41.
Pidonia (Pidonia) muneaka muneaka: HAYASHI, 1969, Bull. Osaka Jonan Women's Jr. Coll., **4**: 71, 75. **(Syn. nov.)**
Pidonia (Pidonia) muneaka amagisana HAYASHI, 1969, *op. cit.*, **4**: 71, 75. **(Syn. nov.)**
Pidonia (Pidonia) muneaka tamanukii HAYASHI, 1969, *op. cit.*, **4**: 71, 77. **(Syn. nov.)**

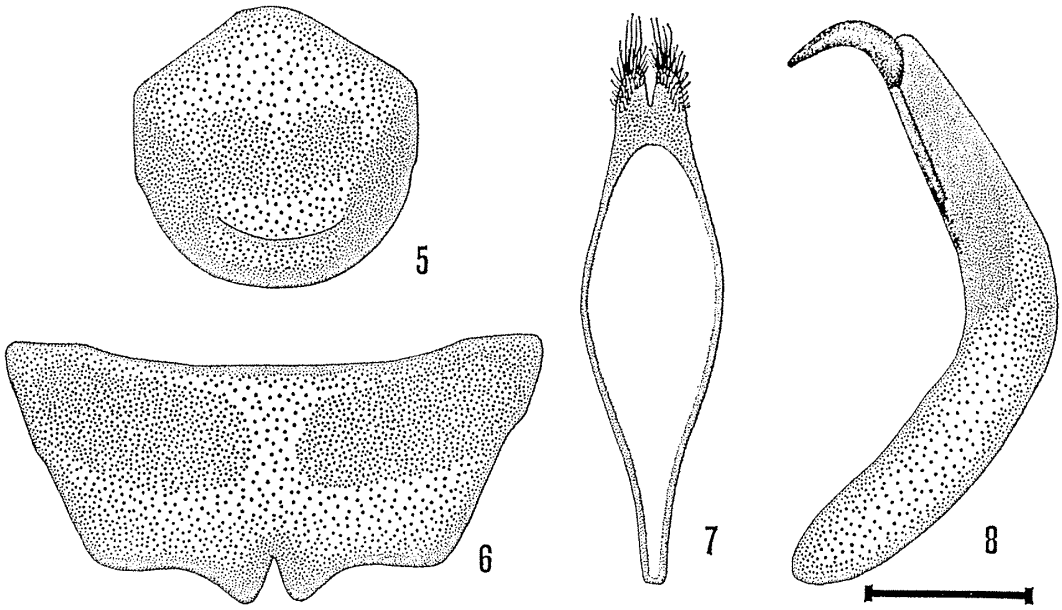
Male. Form elongate; integument black; pronotum red or black; elytra brownish yellow with black markings; mouthparts and appendages usually pale. Tempora slightly narrowed posteriorly in anterior half and abruptly constricted in posterior half; last segment of maxillary palpus broadened apically with obtusely angulate outer margin; antennal tubercles strongly raised. Prothorax longer than basal width, broadly constricted at base and apex; breadth across lateral prominent portions slightly wider than base; basal margin weakly bisinuate; sides sharply prominent. Elytra with truncate apices, 2.76 times as long as basal width. Last tergite rounded to weakly emarginate at apex (Fig. 5); apical margin of last sternite obtusely and deeply emarginate at middle (Fig. 6). Genital organ moderately sclerotized; median lobe relatively thick, bending ventrally at middle, apex attenuately pointed, bending inwards (Fig. 8); lateral lobes slightly shorter than median lobe, apices produced with sparse long terminal hairs (Fig. 7). Length: 10.7–8.7 mm; width: 2.7–2.1 mm.

Female. More robust and more parallel-sided than in male; elytra 2.53 times as long as basal width; antennae barely attaining elytral apices; last tergite rounded to slightly emarginate at apex; last sternite rounded at apical margin. Length: 11.5–8.5 mm; width: 3.2–2.1 mm.

Distribution. Japan (Honshu).

Flight period. April to July.

Flower records. Rosa, Rubus, Vitis, Actinidia, Kerria, Castanea, Angelica,



Figs. 5–8. *Pidonia discoidalis* PIC, ♂. —— 5, Last tergite; 6, last sternite; 7, lateral lobes of male genitalia; 8, median lobe. Scale: 0.5 mm.

Hydrangea, *Weigela*, *Filipendula*, *Aesculus*, *Schizophragma*, *Rodgersia*.

Remarks. This species is variable in coloration and elytral markings. The individuals currently called *Pidonia muneaka* are actually an local form of *P. discoidalis* with reddish prothorax. Such specimens are found in the Japan Sea side of Honshu and in the Izu Peninsula and Mt. Fuji on the Pacific side of Honshu.

Pidonia (*Pidonia*) *shikokensis shikokensis* CHÛJÔ et HAYASHI, stat. nov.

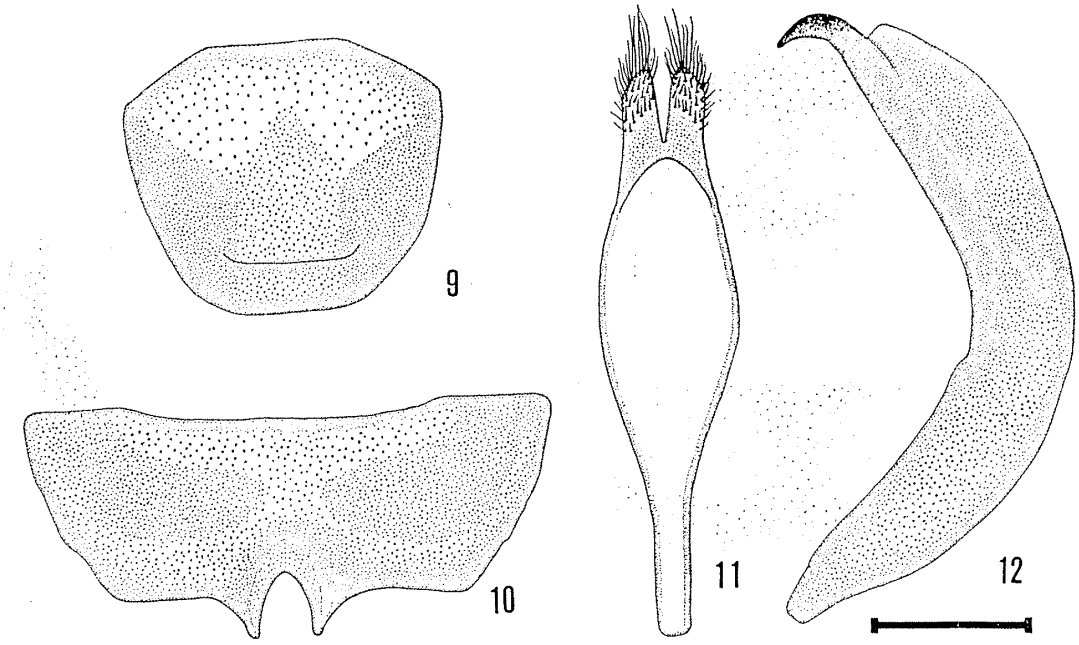
(Figs. 9–12)

Pidonia (*Pseudopidonia*) *discoidalis* PIC f. *shikokensis* CHÛJÔ et HAYASHI, 1951, Bull. Takarazuka Insectarium, (78): 4.

Pidonia (*Pidonia*) *discoidalis shikokensis*: HAYASHI, 1969, Bull. Osaka Jonan Women's Jr. Coll., **4**: 70, 74; KUBOKI, 1975, Coleopt. News, (25/26): 6.

Pidonia sp., KUBOKI, 1974, Coleopt. News, (21/22): 6.

Male. Form elongate; integument black; pronotum brownish fulvous or black; elytra brownish yellow with black markings; mouthparts and appendages usually pale. Tempora slightly narrowed in anterior half and abruptly constricted in posterior half; last segment of maxillary palpus broadened apically with straight outer margin; antennal tubercles weakly raised. Prothorax longer than basal width, broadly constricted at base and apex; breadth across lateral prominent portions nearly as broad as base; basal margin bisinuate; sides sharply prominent. Elytra with truncated apices, 2.77 times as long as basal width. Last tergite rounded to weakly emarginate at apex (Fig. 9), last sternite obtusely and deeply emarginate at apex (Fig. 10). Genital organ strongly sclerotized; median lobe relatively thick,



Figs. 9–12. *Pidonia shikokensis shikokensis* CHÛJÔ et HAYASHI, ♂. —— 9, Last tergite; 10, last sternite; 11, lateral lobes of male genitalia; 12, median lobe. Scale: 0.5 mm.

curved ventrally with attenuately pointed apex (Fig. 12); lateral lobes slightly shorter than median lobe; apices produced with sparse long terminal hairs (Fig. 11). Length: 11.5–9.6 mm; width: 2.8–2.2 mm.

Female. More robust and more parallel-sided than in male; elytra 2.63 times as long as basal width; antennae barely attaining elytral apices; last tergite caudate, pointed at apex; apical margin of last sternite rounded. Length: 12.3–8.8 mm; width: 3.1–2.2 mm.

Distribution. Japan (Shikoku).

Flight period. April to August.

Flower records. *Symplocos, Hydrangea, Weigela.*

Pidonia (*Pidonia*) *shikokensis amanoi* HAYASHI, comb. nov.

(Figs. 13–16)

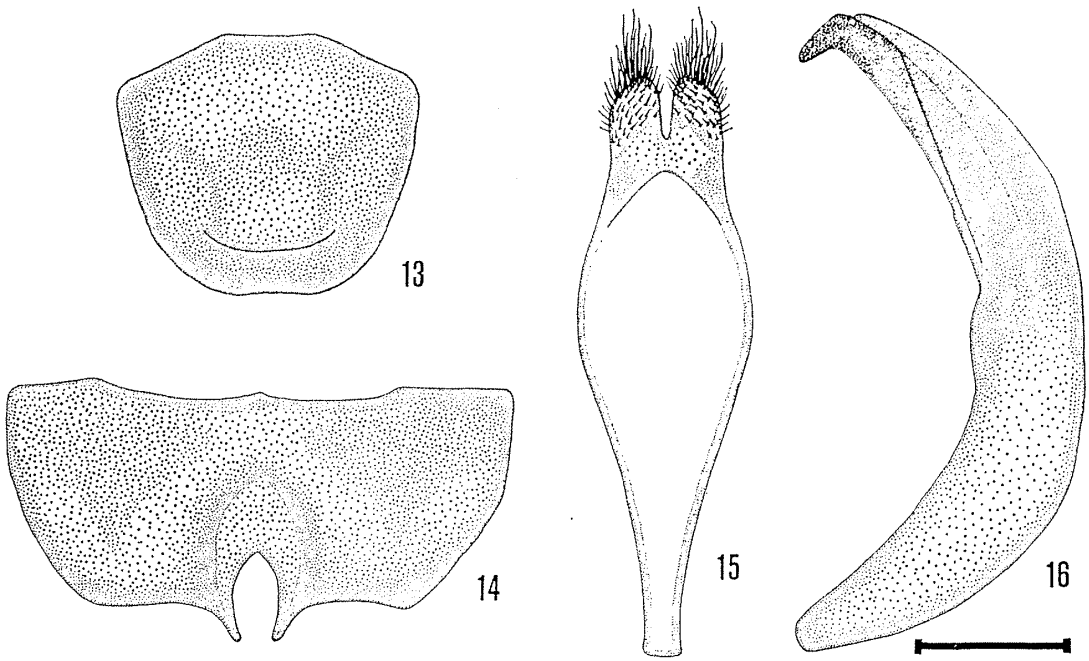
Pidonia (*Pidonia*) *discoidalis amanoi* HAYASHI, 1968, Bull. Osaka Jonan Women's Jr. Coll., **4**: 71, 75; KUBOKI, 1975, Coleopt. News, (25/26): 7; AMANO, 1976, Kita-Kyûshû no Konchû, (22): 7.

This subspecies differs from the nominate one in having the following points: apical margin of last sternite in male bilobed and its tips provided with many long hairs, and its middle deeply incised (Fig. 14); male genital organ strongly sclerotized; median lobe robust and thick; apex stout (Fig. 16).

Distribution. Japan (Kyushu).

Flight period. May to July.

Flower records. *Rubus, Symplocos.*



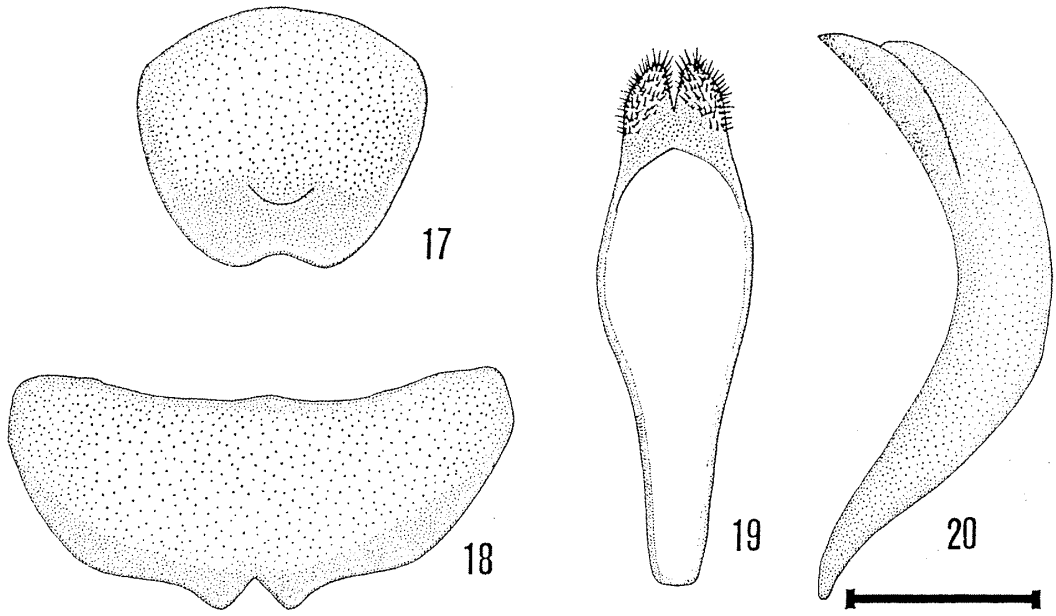
Figs. 13–16. *Pidonia shikokensis amanoi* HAYASHI, ♂. —— 13, Last tergite; 14, last sternite; 15, lateral lobes of male genitalia; 16, median lobe. Scale: 0.5 mm.

Pidonia* (*Pidonia*) *neglecta sp. nov.

[Japanese name: Himiko-hime-hanakamikiri]

(Figs. 17–20)

Male. Form elongate; integument black; pronotum brownish fulvous or black; elytra brownish yellow with black markings; mouthparts and appendages usually pale. Head densely punctate, thinly clothed with short appressed yellowish or somewhat golden pubescence; clypeus coarsely and irregularly punctate; tempora with substiff pubescence, narrowed posteriorly in anterior half and gently constricted in posterior half; last segment of maxillary palpus broadened apically with obtusely angulate outer margin; antennal tubercles weakly raised. Antennae long and slender, apical two segments beyond elytral apices; 1st segment finely punctate, thinly clothed with short appressed pubescence; 2nd longer than broad; 3rd slightly longer than first two segments together; 4th shorter than 3rd, shorter than 6th; 5th longest; 6th to 10th successively shortened; 11th slightly longer than 10th. Prothorax longer than basal width, broadly constricted at base and apex; breadth across lateral prominent portions nearly as broad as base; basal margin weakly bi-emarginate, obviously broader than apical margin; sides obtusely prominent; disk of pronotum finely and densely punctate except for a polished median impression extending from middle of disk to basal constriction; pubescence fine, thin and appressed; prosternum shining, thinly clothed with short pubescence; meso- and metasterna finely and densely punctate, clothed with fine appressed pubescence.



Figs. 17–20. *Pidonia neglecta* sp. nov., ♂. —— 17, Last tergite; 18, last sternite; 19, lateral lobes of male genitalia; 20, median lobe. Scale: 0.5 mm.

Elytra 2.84 times as long as basal width; sides straight, gradually narrowing posteriorly before curving to apices which are truncated; surface coarsely and deeply punctate; pubescence moderately long, sparse and suberect. Legs relatively slender, finely punctate, clothed with short pubescence which is subappressed on femora and suberect on tibiae and tarsi. Abdomen finely and densely punctate, densely clothed with appressed pale pubescence; apical margin of last tergite emarginate at middle (Fig. 17), apical margin of last sternite bilobed, triangularly emarginate at middle (Fig. 18). Genital organ moderately sclerotized; median lobe relatively slender, curved ventrally, with acutely pointed apex (Fig. 20); lateral lobes shorter than median lobe, apices produced with dense short terminal hairs (Fig. 19). Length: 10.6–8.1 mm; width: 2.6–1.7 mm.

Female. More robust and more parallel-sided than in male; elytra 2.45 times as long as basal width; antennae barely attaining elytral apices; last tergite rounded slightly emarginate at apex; apical margin of last sternite rounded. Length: 10.4–8.4 mm; width: 3.1–1.9 mm.

Type-series. Holotype: ♂, Daisen-rindo (1,200 m in alt.), Ôita Pref., 30. vi. 1974, H. IRIE leg.

Paratypes: 13 ♂♂, 10 ♀♀, the same data as the holotype; 2 ♂♂, 5. v. 1973, Mt. Hiko (800 m in alt.), Fukuoka Pref., H. TAKESHITA leg.; 1 ♂, 2 ♀♀, Mt. Hiko, 28. v. 1973, K. ADACHI leg.; 2 ♂♂, 1 ♀, 6. vi. 1973, the same locality and collector; 4 ♂♂, 2 ♀♀, 3. v. 1971, Mt. Shôji, Fukuoka Pref., K. ADACHI leg.; 1 ♂, 2 ♀♀, 30. vi. 1974, Mt. Kuzhû, Ôita Pref., M. ONO leg.; 1 ♀, 29. vii. 1974, Shiiya Pass, Kumamoto Pref., S. NAOMI leg.; 20 ♂♂, 3 ♀♀, 28–31. v. 1974, Odamiyama (about

1,000 m in alt.), Ehime Pref., K. ANNO leg.; 1 ♂, 1 ♀, 23. v. 1973, Mt. Irazu, Kôchi Pref., R. SHIMAMOTO leg.

Type depository. The holotype is preserved in the collection of the Laboratory of Entomology, Tokyo University of Agriculture, Tokyo, 156 Japan. The paratypes are deposited in the author's private collection.

Distribution. Japan (Kyushu, Shikoku).

Flight period. April to July.

Flower records. *Rosa*, *Acer*, *Hydrangea*, *Symplocos*.

Remarks. This new species is allied to *Pidonia discoidalis* PIC including f. *muneaka*. This form was originally described as an aberrant one of *discoidalis* with brief description by TAMANUKI (1942). HAYASHI (1969) transferred it to specific rank without the type designation. Having examined a number of specimens which were collected in various parts of Japan, I have come to the conclusion that the individuals currently called *P. muneaka* consist of two good species. The one from Honshu was synonymous with *P. discoidalis* PIC. The another one occurring in Shikoku and Kyushu was described as a new species. The name, *muneaka* was not adopted for a new species for lack of the type designation.

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