

**A review of the *Odontosia carmelita-patricia* species group (Lepidoptera, Notodontidae), with descriptions of two new species from Russia and Japan**

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**Abstract** The *Odontosia carmelita-patricia* species group is revised. It contains five species, including two new species: *Odontosia walakui* Kobayashi, sp. nov. from Hokkaidō (Japan) and *Odontosia brinikhi* Dubatolov, sp. nov. from Transbaikalia and Central Yakutia (Russia). *Odontosia morumoi* Inoue, 1955, stat. rev. is depicted to be a good species, based on the male genital structure. A new knowledge about distribution of *Odontosia carmelita* (Esper, 1790) and *Odontosia patricia* Stichel, 1918 is referred.

In the palaearctic region, the genus *Odontosia* Hübner, 1819 consists of three known species: *Odontosia sieversii* (Ménétrières, 1856), *O. carmelita* (Esper, 1790) and *O. patricia* Stichel, 1918.

*O. sieversii* is characterized by long pectinate antennae and by presence of two processes on valva inner side (costal ampulla and ventral harpe), while the other two have thin antennae and a single process (harpe) in the central part of the inner side of valva. It ranges from Southern Fennoscandia and Central Europe (Rougeot & Viette, 1983, de Freina & Witt, 1987) to Japan, and the Japanese population belongs to subspecies *O. s. japonibia* Matsumura, 1929.

*O. carmelita* ranges from Western Europe (Rougeot & Viette, 1983, de Freina & T. Witt, 1987) to Khakasia (Sarala near Abaza) in Russia west of the Enisei River. It was formerly cited from the Baikal and Central Yakutia areas based on the material in the collection of Siberian Zoological Museum (SZMN) of the Institute of Animal Systematics and Ecology (Schintlmeister et al., 1987). During the present study on the *O. carmelita-patricia* group including the same material, Dubatolov has not found any *O. carmelita* specimen from the area east of the Enisei River, and determined the easternmost locality of *O. carmelita* as mentioned above.

Inoue (1955) described *Odontosia marumoi* from Honshū, Japan. Schintlmeister (1989) checked on the specimens of *O. patricia* from Primorye and upper Amur district, and on the specimens of *O. marumoi* from Japan. He concluded *O. marumoi* to be conspecific to *O. patricia*.

So in Japan, two species, i. e. *O. patricia* and *O. sieversii*, have been recognized to be distributed. In May 2005, Kobayashi (author) collected several specimens of unfamiliar *Odontosia* species in Hokkaidō, Japan and found they did not belong to the known two species in Japan. Dubatolov has studied *O. carmelita* in Siberia and *O. patricia* from Primorye. And we have come to the conclusion that *O. marumoi* is an independent good species distinguishable from *O. patricia* and Hokkaidō-species of *Odontosia* is a new one. And a further fact has revealed that another new species is distributed in Transbaikalia and Central Yakutia. We describe them as new to science below.

***Odontosia walakui* Kobayashi, sp. nov.** (Figs 1, 2)

Male. Wing span 35–40 mm, forewing length 18–20 mm. Forewing ground color dark chestnuts brown. Antemedial line whitish, zigzag. Postmedial line whitish, conspicuous, thick and oblique in costal region, white spots on vein  $M_1$  to  $1A+2A$ . A white spot on  $CuP$  (vestigial) remarkable. Medial fascia darker than the rest of forewing, getting narrower towards the dorsum with much darker short tail. On costa there are five white dashes at the end of  $Sc$ ,  $R_1$ – $R_4$ . Discal spot hardly visible or slightly paler. Subterminal line not visible. Marginal line with cilia dark brown in the cells, tinged whitish at termen. Hindwing concolorous with the forewing slightly paler. The stalked  $Rs+M_1$  bifurcates in the midway of the upper discoidal angle and the termen. Antenna thin, lamellate with cilia (Fig. 12a). Head and patagia dark chestnuts brown. Tegula dark chestnut brown with rim whitish. Posterior thorax whitish. Abdomen dark fuscous brown.

Female. Wing span 43–46 mm, forewing length 21–22 mm. Larger than the males. Forewings similar to those of the males, but lines less conspicuous.

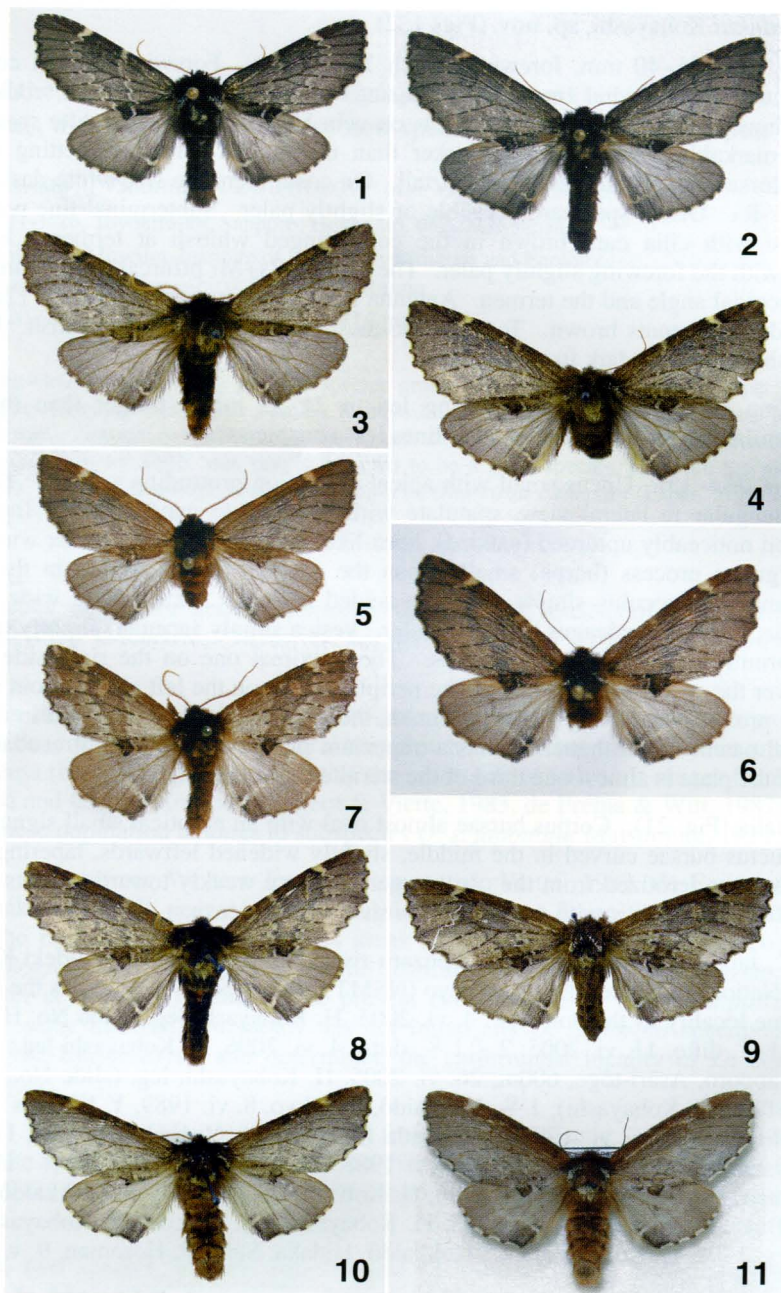
Male genitalia (Fig. 13). Uncus small with apical projection protruding ventrad. The apical projection triangular in lateral view, spatulate with dull end in caudal view. Top slightly bilobed. Socii noticeably upturned (caudad), horn-like. Tegumen simple, rather wide. Valva wide with ligulate process (harpe) smaller than the uncus. Costa swollen in the middle. Cucullus rounded. Sacculus simple with rim folded inward. Juxta round, wide. Saccus rounded, wide, simple. Aedeagus simply tubular. Vesica simply saccular, slightly turning to the left. Cornuti with two spinous patches. The proximal one on the right side straight, developed over the end of the aedeagus. The peripheral one on the left small, about one-third length of the proximal one. In another specimen, there are four spines scattered in the left of the peripheral patch. The 8th sternite has a trapezium plate in the middle of caudal margin. The width of the plate is almost one third of the sternite marginal length.

Female genitalia (Fig. 21). Corpus bursae almost oval with an elliptical small signum on the left side. Ductus bursae curved in the middle, slightly widened leftwards, tapering towards the corpus, being sclerotized from the ostium, getting more weakly towards corpus. Ostium wide. Lamella antevaginalis with caudal margin shallowly concave.

Holotype: ♂, Japan, Hokkaidô, Hidaka, Wenzaru-river, 550m, 28. v. 2005, Hideki Kobayashi leg., in coll. National Science Museum Tokyo (NSMT). Paratypes: 1 ♂, ditto as the holotype; 5 ♂ 5 ♀, same locality as the holotype, 4. vi. 2005, H. Kobayashi leg. (slide No. HK1195m, HK1201f); 1 ♂, ditto, 11. vi. 2005; 2 ♂ 1 ♀, ditto, 4. vi. 2006, H. Kobayashi leg.; 3 ♂ 3 ♀, Hokkaidô, Sapporo, Asari-tôge, 600m, 26. vi. 2005, H. Kobayashi leg. (slide No. HK1241) (in coll. NSMT or H. Kobayashi); 1 ♀, Hokkaidô, Sôunkyo, 8. vi. 1989, Y. Kishida leg.; 1 ♀, Hokkaidô, Nissyô-tôge, 6. vi. 1989, Y. Kishida leg. (in coll. Y. Kishida); 1 ♂, Hokkaidô, (Tokachi), Nakasatsunai, Kamisatsunai, 18. v. 1988, M. Kameda leg.; 2 ♂ 1 ♀, Hokkaidô, Sôya, Sarufutsu, Asajino, 19 m, 27. v. 2006, H. Kobayashi leg.; 7 ♂ 1 ♀, Hokkaidô, Kitami, Rubeshibe, Bukazan, 950 m, 14. vi. 2006, H. Kobayashi leg. (in coll. H. Kobayashi); 1 ♂, Asajino, 18. v. 1991, H. Kogi leg.; 1 ♂, Hokkaidô, Hidaka, Samani, Horoman, 9. v. 1997, H. Kogi leg. (in coll. H. Kogi).

**Etyymology.** The species name is dedicated to my son, Walaku.

**Habitat.** Mixed forest with *Salix*, *Betula*, *Alnus*, *Quercus*, *Abies*. The habitual region of this new species in Hokkaidô is a transitional zone to conifer forest from deciduous broad leaves forest. The altitude is about 500m or higher above sea level. The average temperature of a year is about 7°C. In winter time the temperature drops under –20°C and snow piles over 2 m. In summer time it rises near to 25°C in the daytime, drops under 20°C in the evening. The moths fly for a short term in spring; the temperature is around 10°C in the evening and drops



Figs 1–11. *Odontosia* spp. 1–2. *O. walakui*. 1. ♂, holotype. 2. ♀, paratype, Hokkaido, Hidaka, 4. vi. 2005. 3–4. *O. brinikhi*. 3. ♂, holotype. 4. ♀, Russia, Chita Province, Kurleya, 1. vi. 2001. 5–7. *O. marumoi*. 5. ♂, Honshu, Konsei-toge, 17. vi. 1993. 6. ♀, Honshu, Konsei-toge, 17. vi. 1993. 7. ♂, Honshu, Yatsugatake, 29. vi. 1971 (pale type). 8–9. *O. patricia*. 8. ♂, Russia, Primorskii Krai, Gornotayozhnoe, 8. v. 1995. 9. ♀, Russia, Primorskii Krai, 17. v. 1974. 10–11. *O. carmelita*. 10. ♂, Russia, Novosibirsk, 14. v. 1983. 11. ♀, Central Russia, Ryazan, 23. iv. 1999.

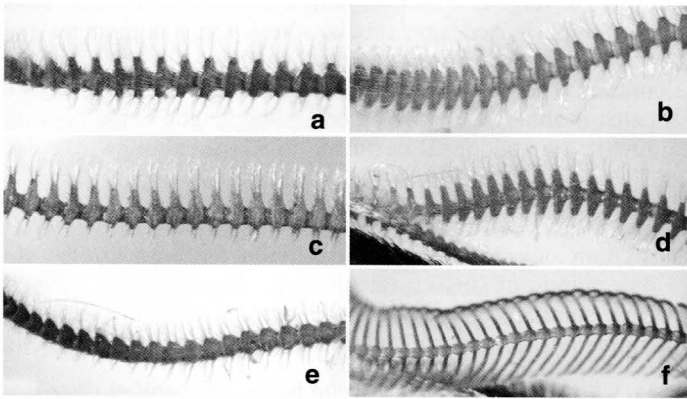


Fig. 12. Male antenna of *Odontosia* spp. a: *walakui*; b: *brinikhi*; c: *marumoi*; d: *patricia*; e: *carmelita*; f: *sieversii*.

lower late at night.

**Diagnosis.** The differential diagnosis of *O. walakui* from *O. patricia*, *O. marumoi* and *O. sieversii* by external appearance is as follows. The ground color of *O. walakui* is uniformly dark chestnut brown and the reniform stigma is hardly visible, while the wing color orange brown and reniform paler in *O. marumoi*. The termen of *O. walakui* is slightly angled at the vein  $M_3$ , while in *O. marumoi* rather smooth as Inoue (1955) stated. In the hindwing, vein  $Rs+M_1$  bifurcates at more proximal point than in *O. marumoi*.

The postmedial line of *O. walakui* comes near to the antemedial line on the costa; therefore, on the costa, the width of medial fascia is narrower than the distance between the apex and the postmedial line. In other species, including *O. patricia*, the medial fascia is wider. The antenna is thinner than in *O. patricia*. It is thick, bipectinate in *O. sieversii*. (Fig. 12f.)

In terms of the male genitalia and related parts, a simple differentiation of *O. walakui* from *O. patricia* and *O. marumoi* is the 8th sternite. It has a small plate almost trapezium with slightly rounded upper hem in *O. walakui*, smaller and semicircular in *O. marumoi*, wide and low arcuate in *O. patricia*. The differences of the uncus, cornuti, are distinguishable, too.

#### *Odontosia brinikhi* Dubatolov, **sp. nov.** (Figs 3, 4)

**Male.** Wing span 36–44 mm, forewing length 18–22 mm. Forewing ground color, like in *O. carmelita*, dark brown with light violet tint. Antemedial line zigzag-like, but poorly visible, slightly lighter than the ground color. Postmedial line better visible, also light, conspicuous, thick at costa, small whitish dots on veins remarkable. Medial fascia slightly darker than other ground coloration, being narrower towards the dorsal margin with slightly darker tassel. On costa poorly visible minute whitish dashes present at  $Sc$ ,  $R_1$ – $R_3$ . Subterminal line slightly darker than the ground color; fringe check-like, so subterminal line with dark parts of fringe form a feeling of dentate margin. Better prominence of the vein  $M_3$  end not well expressed. Hindwing like forewing but unicolorous, except for darker tornal part, which is crossed by a whitish line. Antennae (Fig. 12b) thin, ventrally with triangular processes covered with cilia, but these processes are not so wide as in *O. patricia*. Head, thorax and abdomen dark brown.

**Female.** Wing and body coloration like in males, but antennae with light jags.

**Male genitalia** (Fig. 14). Uncus triangular in lateral view, small, like in *O. marumoi*, without noticeable split at apex. Socii horn-like, noticeably upturned. Valvae wide, oval, with harpe

low triangular with tips converged. Sacculus with a rim folded inward. Juxta round, wide. Saccus rounded, wide, simple. Aedeagus tubular. Vesica saccular, ductus ejaculatorius with a sclerotized plate. There are three elongate cornuti patches. The proximal part of the largest consists of dense cornuti. The second patch is twice shorter, but as wide as the largest one. The third smallest patch is about 2/3 of the second patch length, consists of nearly ten strong spine-like scarce cornuti. 8th abdominal sternite with a pocket hollow-like, low trapezoid, its termen concave.

Female genitalia (Fig. 19). Very similar to one another in *O. carmelita-patricia*-complex. Only a structure of signum looks to have specific differences. In *O. brinikhi* it is the largest in group and have widest margin of small spiniculi on it. Signum of *O. carmelita* is wide, but shorter and has narrow spiniculi margination. *O. patricia* have the narrowest signum with narrow spiniculi margination. *O. walakui* and *O. marumoi* have rather small signa.

Holotype: ♂, Russia, Chita Province, River Argun basin, left bank of river Budyumkan in 5–7 km upstream from the mouth, edge of mixed forest, by light, 31. v. 2001, leg. V. Dubatolov, T. Vlasova, S. Gordeev. (In coll. SZMN). Paratypes: 1 ♀, ditto as the holotype, 26. v. 2001 (Fig. 19); 1 ♂, ditto as the holotype, 29. v. 2001; 1 ♂ 1 ♀, ditto as the holotype, 31. v. 2001 (in coll. SZMN and the entomological collection of the Pedagogical University in Chita); 1 ♀, Russia, Chita Province, River Argun basin, about 90 km ENE from Gazimurskii Zavod settlement, 5 km E from Kurleya village, forest edge, by light, 1. vi. 2001, V. V. Dubatolov, T. Vlasova, S. Gordeev; 1 ♂, Russia, Chita, Krestovaya Mt., 31. v. 2003, S. Gordeev leg. (in the entomological collection of the Pedagogical University in Chita); 1 ♂, Russia, Buryatia, Baikal Nature Reserve, Taezhnyi, 30. vii. 1984 (data is questionable), leg. P. Ustjuzhanin (in coll. SZMN); 1 ♂, Russia, Yakutia, Oktemtsy, lower flood plain [of the river Lena], 11. vi. 1975, leg. T. Maksimova (in coll. SZMN); 2 ♂, Bychikha near Knabarovsk 16–17. v. 2006. V. Duvatolov leg.

Etymology. The species name is dedicated to Mr V. A. Brinikh. He is the former director of the Dahurian Nature Reserve in the Chita Province of Russia, the organizer of discovering and investigation of the relic oak forest on the Argun River, where the new species was found.

Habitat. Mixed forests with larch, birch, aspens, sometimes pines, and other trees.

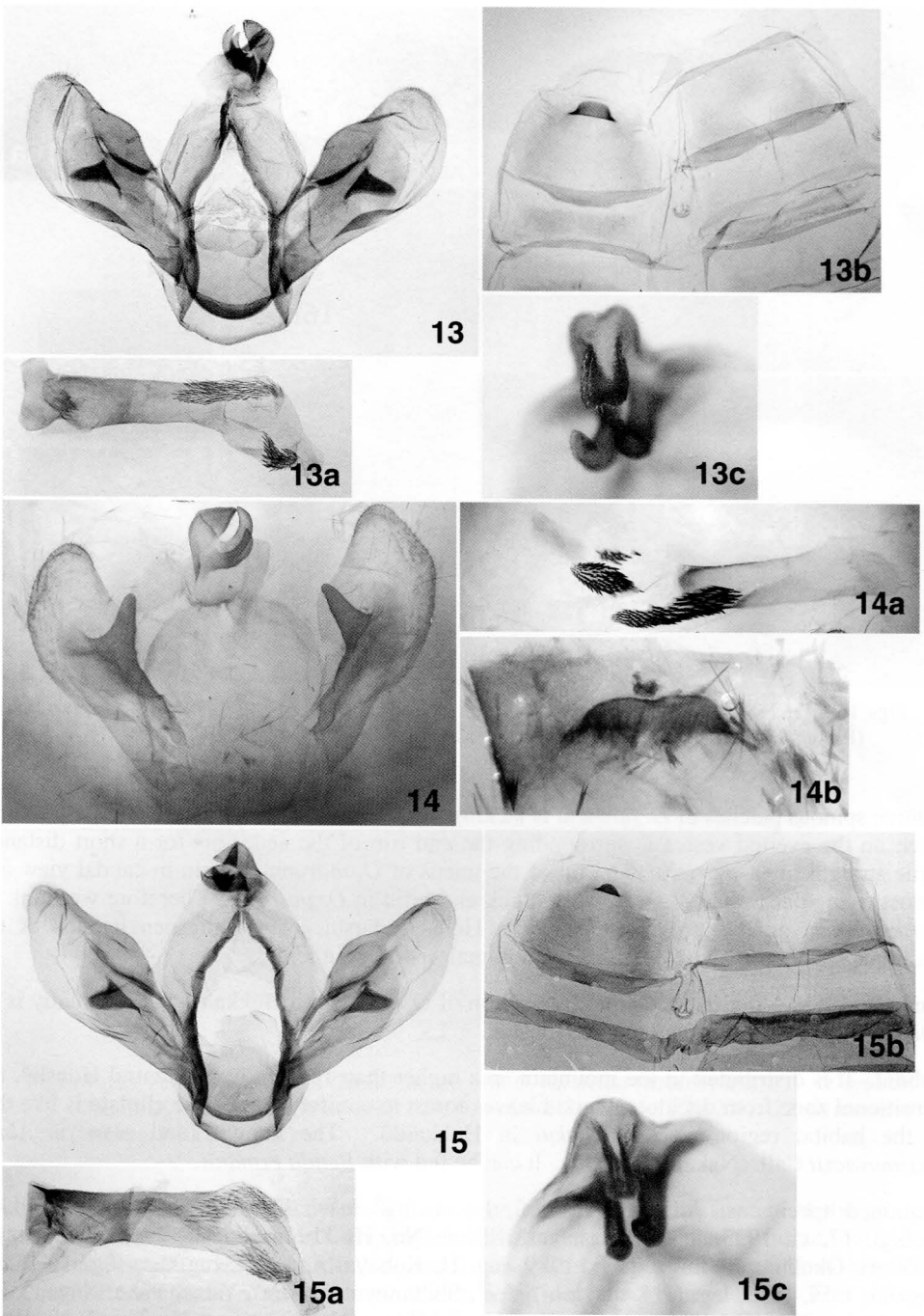
### *Odontosia marumoi* Inoue, stat. rev. (Figs 5–7)

*Odontosia marumoi* Inoue, 1955, *Tinea* 2: 114, pl. 13: 1 (imago), pl. 14: 2 (valva & 8th sternite); Okagaki, 1958: 47; Okano, 1959: 163.

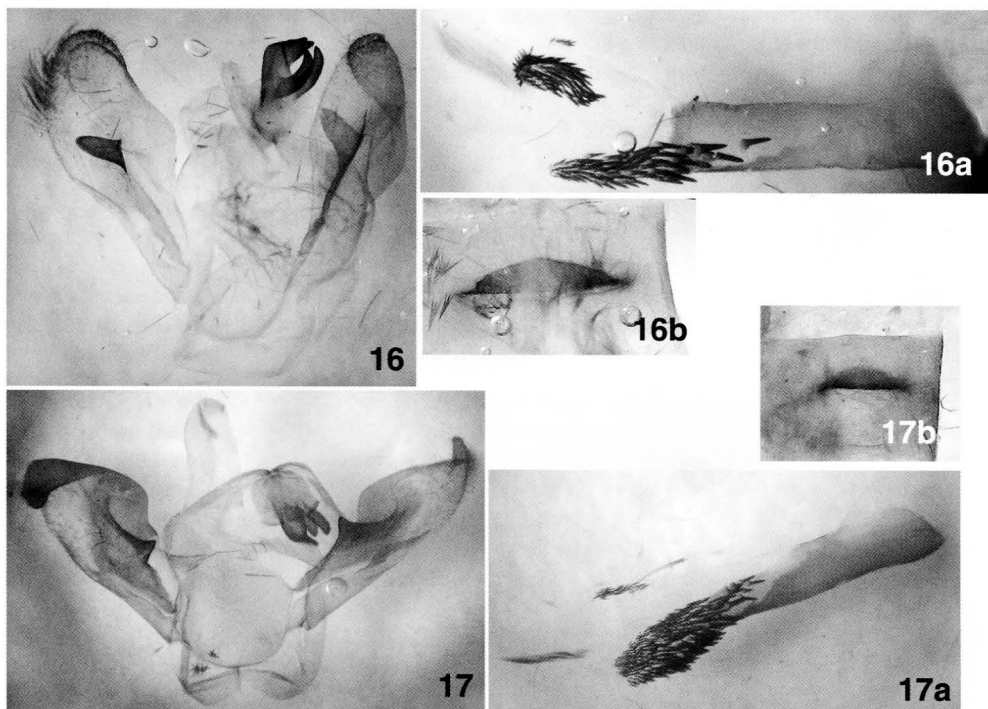
*Odontosia carmelita*: Marumo, 1933, *Kontyû* 6: 293 (nec Esper, misidentification)

*Odontosia patricia*: Sugi, 1982: pl. 145: 24; Kameda, 1989: 16 (nec Stichel, misidentification); Schintlmeister, 1989: 97 (part, as a senior syn. nov. of *O. marumoi*).

*Odontosia marumoi* was described based on a specimen captured at Tokugô-pass, Kami-Kôchi, Honshû, Japan. The altitude is about 2100m. The same species had been recorded by Marumo (1933) as *Odontosia carmelita* (nec Esper, misidentification). The collecting place is Kokushi-dake, Yamanashi, Honshû, altitude 2500 m. This species have been treated as a subspecies of *Odontosia patricia* Stichel, 1918 which was described on the basis of specimens from Vladivostok (Schintlmeister, 1989). However, the wing color of *O. patricia* is red brown and the yellow reniform stigma on the forewing is distinct, and it has its termen slightly angled at M<sub>3</sub>. The color of *O. marumoi* is orange brown rather than red brown and the reniform stigma is pale and distinct. The termen is smooth at M<sub>3</sub>. The hindwing vein Rs+M<sub>1</sub> bifurcating at more peripheral point (long stalk) than in *O. patricia*. Adding to those differences of the external appearance, the shape of genitalia is distinguishably different. The 8th sternite has a small and semicircular flap in *O. marumoi*, low arcuate in *O. patricia*. The cornuti are great value to separate these two as in other *Odontosia* species. The smallest patch



Figs 13–15. Male genitalia of *Odontosia* spp. (a: aedeagus; b: 8th sternite; c: magnified uncus).  
 13. *O. walakui* (HK1195). 14. *O. brinikhi* (Chiata). 15. *O. marumoi* (HK1194).



Figs 16–17. Male genitalia of *Odontosia* spp. (a: aedeagus; b: 8th sternite). 16. *O. patricia* (Primorskii). 17. *O. carmelita* (Novosibirsk).

in three spinous patches of *O. patricia* is lacking in *O. marumoi*. In *O. marumoi*, the proximal patch on the everted vesica is surrounding the end rim of the aedeagus for a short distance, while straight in *O. patricia*. The tip of the uncus of *O. marumoi* is thin in caudal view and almost triangular in lateral view, while thick and bifid in *O. patricia*. Therefore we think *O. marumoi* is a good species distributed in Honshû, Japan. The wingspan lengths of the examined specimens are from 35–39 mm in males, 40mm in female.

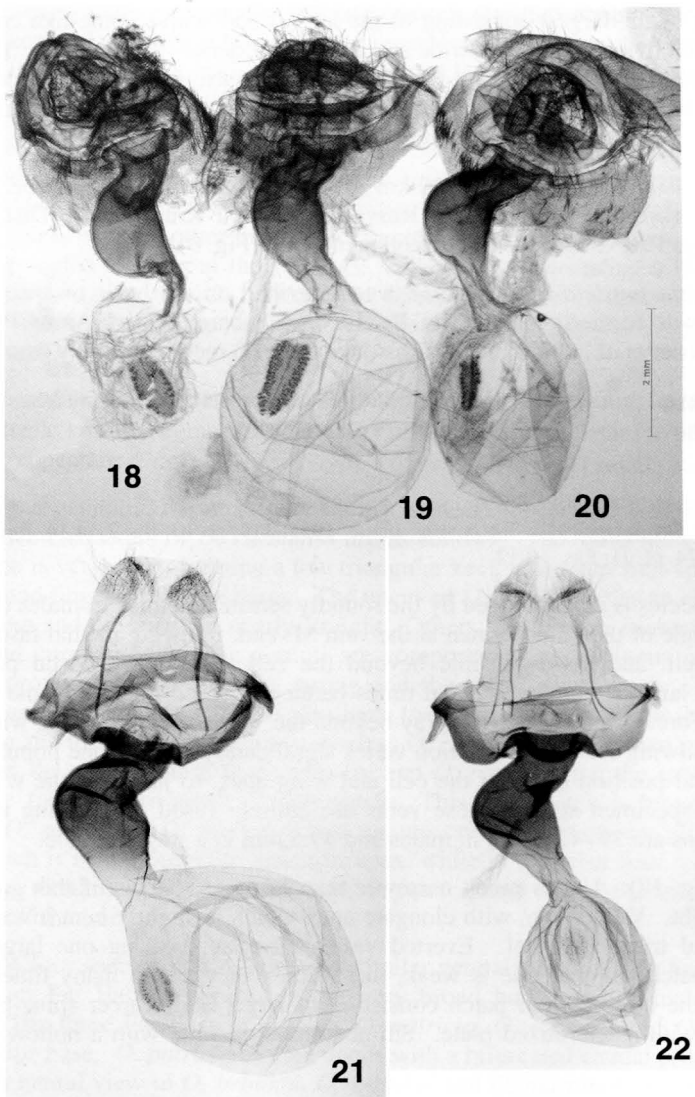
Kameda (1989: 16) mentioned the distribution of *O. patricia* in Hokkaidô but it actually is *O. walakui*. *O. marumoi* is endemic to Honshû.

**Habitat.** It is distributed in the mountain area higher than 1500 m in the central Honshû, the transitional zone from deciduous broad leaves forest to conifer forest. The climate is like that of the habitat region of *O. walakui* in Hokkaidô. The known food plant is *Alnus maximowiczii* Call. (Nakatomi, 1995). It can be fed with *Betula ermanii*.

**Examined specimens:** All from Honshû, Japan: 1 ♂ 1 ♀, Kensei-tôge (1700m), Nikkô, Tochigi, 17. vi. 1993, leg. H. Kobayashi. Slide No. HK1194m, 1202f; 1 ♂, Teshirozawa (1600m), Okukinu, Tochigi, 2. vi. 1989, leg. H. Kobayashi; 1 ♂, Mugikusa-tôge (1900m), Nagano, 1. vi. 1991, leg. H. Kobayashi); 1 ♂, Shibunoyu (1900m), Yatsugatake, Nagano, 29. vi. 1971, leg. R. & F. Ishikawa; 1 ♂, Kisojihara (1250m), Nagawa-mura, Nagano, 1. vii. 1983, S. Sugi leg.; 1 ♂, Oogisawa, Nagano, 3. vi. 1972, Y. Kishida leg. (slide No. HK1277).

### *Odontosia patricia* Stichel (Figs 8–9)

*Odontosia patricia* Stichel, 1918: 38-39, pl. 1, fig. 20. Type, ♂, in coll. Staudinger; Gaede, 1933: 182 (as variation of *O. sieversii*); Schintlmeister, 1989: 97; Schintlmeister, 1992: fig. 549.



Figs 18–22. Female genitalia of *Odontosia* spp. 18. *O. carmelita* (Krasnoyarsk). 19. *O. brinikhi* (Chita). 20. *O. patricia* (Primorskii). 21. *O. walakui* (Hokkaido, HK1201). 22. *O. marumoi* (Honshu, HK1202).

**Diagnosis.** The species is easily recognized from other continental species of the group by lighter red-brown ground color with grayish suffusion, and dark medial fascia, outlined by whitish antemedial- and postmedial zigzag lines. Costal spots of these lines are not so strongly different in size, the postmedial one being only two times larger. The yellowish reniform stigma on the forewing is more or less distinct. Nevertheless, there is a noticeable light angle of the outer termen at the vein  $M_3$  end. The wing expanse of the examined specimen is 39.5 mm. Male antennae with wide triangular processes on each unit (Fig. 12d).

**Male genitalia** (Fig. 16). Uncus triangular in lateral view, with its top noticeably bilobed. Socii slightly upturned horn-like. Valva wide, oval, with apex broadly rounded. Harpe finger-like, with edges weakly converged. Everted vesica elongate, bearing three cornuti patches.



The proximal part of the largest consisting of the largest and scarce spine-like cornuti. The second cornuti patch twice shorter, but wide and consists of dense small cornuti. The smallest patch more than three times shorter than the second patch, narrow elongate and consisting of weak spine-like cornuti. Ductus ejaculatorius with a sclerotized plate. 8th abdominal sternite with a pocket hollow like a low roundly triangular.

Material. 1 ♂, Russia, Primorskii Krai, 20 km from Ussuriisk, Gornotayozhnoe, 8. v. 1995, leg. E. A. Beljaev (in coll. SZMN); 1 ♀, Russia, Primorskii Krai, Khasan District, Nature Reserve "Kedrovaya Pad'", 17. v. 1974, V. Kononenko leg. (Fig. 9)

Remarks. *Odontosia patricia* Stichel, 1918 was described on the basis of specimens from Vladivostok and was formerly cited from Primorye, Khabarovsk and Amur Provinces of Russia (Schintlmeister et al., 1987), while Tshistjakov (2001) recorded it only from Primorye.

Habitat. Broad-leaved or mixed coniferous-broad-leaved forests at low altitudes.

### *Odontosia carmelita* (Esper) (Figs 9–10)

*Bombyx carmelita* Esper, 1790: 68, pl. 91, fig. 1.

*Odontosia carmelita*: Grünberg, 1912: 305, t. 46g; Inoue, 1955: 117, pl. 13, fig. 2, pl.14, fig. 1; de Freina & Witt, 1987: 274, pl. 21, figs. 10-12.

Diagnosis. The species is characterized by the roundly serrate antennae in males (Fig. 12e), a noticeable light angle of the outer termen at the vein  $M_3$  end, forewing medial fascia invisible at costa and in cell, and poorly visible beyond the cell. Yellowish costal patch of the postmedial line is large, triangular, several times better expressed than the same spot of the antemedial line. Forewing outer margin gray beyond the vein  $Cu_1$ , contrasting with the wing ground color. Hindwing  $Rs+M_1$  bifurcation varies significantly even in one population, from more or less central position between the cell and wing apex, to just near the wing margin; moreover, in one specimen studied these veins are entirely fused. The wing expanses of examined specimens are 39–42.5 mm in males and 39.5 mm in a single female.

Male genitalia (Fig. 17). Uncus much narrower than in other species of this group. Socii wide, nearly straight. Valva wide, with elongate apex which is slightly bent inwards. Harpe forms a low broad triangular keel. Everted vesica elongate, bearing one large and long elongate cornuti patch, another one is weak, three times shorter and many times narrower. Proximal part of the large cornuti patch consisting of larger and scarcer spine-like cornuti. Ductus seminalis with a sclerotized plate. 8th abdominal sternite with a hollow like a fleet rounded pocket.

Material. 1 ♂, Russia, Novosibirsk, 28.V 1973, leg. N. Opanasenko; 1 ♂, Russia, Novosibirsk, Nizhnyaya Eltsovka, 5. vi. 1978, leg. S. Nikitina; 26 ♂, Russia, Novosibirsk, Academytown, pine-birch forest, 17. v. 1979, 14. v-9. vi. 1983-1992, leg. V. Dubatolov (in coll. SZMN) (Fig. 12e: Novosibirsk, 23. v. 1989); 1 ♂, Russia, Khakasia, Sarala, 9. vi. 1975, leg. Yu. P. Korshunov (in coll. SZMN); 1 ♀, Russia, Krasnoyarsk Province, Eniseisk District, village Yartsevo, 23. vi. 1976, leg. Pupavkin, (Fig. 18); 1 ♀, Central Russia, Ryazan Province, Shilovo District, village Ladyshkino, birch forest, Apr., 23, 1999, I. Kuznetsov leg. (Fig. 11).

Habitat. Birch or mixed pine-birch forests.

### Remarks

We have recognized five species of the *Odontosia carmelita-patricia* species group. In the continent, *O. carmelita* is distributed westernmost, next *O. brinikhi* east of it, then *O. patricia*

easternmost. The latter two species are not enough clarified about their habitat region or transitional zone. To clarify it should be the next work. In Japan, two endemic species are distribute: *O. marumoi* in Honshû and *O. walakui* in Hokkaidô. We are very intrigued by the distribution and divergence of this species group, and have made some speculation as follows.

In terms of external appearance, *O. marumoi* has conspicuous forewings, e.g. roundish termen and color rather orange than brown. The other four species have the wing color dark brown tinted with violet or red. *O. brinikhi* has a rather roundish termen but has a slightly elongated vein  $M_3$ , which is near the other three, *O. carmelita*, *O. patricia* and *O. walakui*. These three species have angled termens at the vein  $M_3$ . This is very interesting. The westernmost *O. carmelita* and the far eastern *O. patricia* and *O. walakui* have common shape of forewings. *O. brinikhi* which inhabits the continent between *O. carmelita* and *O. patricia* has rather roundish termen.

Anyway, Honshû inhabitant, *O. marumoi* has distinguishable forewings and hindwings. This Honshû-endemic species seems to stand in a rather far position from the other four in respect of the wings appearance.

In terms of the genitalia, the most outstanding is the European-West Siberian *O. carmelita*. The distinctive characters of *O. carmelita* are as follows. The valva apex is folded inwards and the harpe is very short, forming a low triangular keel. All other four species have similar oval valvae and finger-like valva harpe. The uncus of *O. carmelita* has an elongated beak-like caudal process and the socii are nearly straight. Others have almost triangular caudal process of uncus and curved socii. The cornuti are composed of two spinous patches on everted vesica, the proximal one being very strong and the distal patch weak. The Japanese two species, *O. marumoi* and *O. walakui* also have two cornuti patches, but the proximal one is not so strong and the distal one is not so weak as *O. carmelita*. These two patches of Japanese species show the same pattern as *O. brinikhi* and *O. patricia*, but the latter two continental species have further third small cornuti patch. This third patch is biggest in *O. brinikhi*, smaller in *O. patricia*. *O. marumoi* has unique cornuti among the all five species; the proximal patch is bent around the aedeagus apex, while in the other four it is straight. In this point of view, the three species, *O. brinikhi*, *O. patricia* and *O. walakui* are on the line and *O. marumoi* is off the line.

Among those four species which have very similar genitalia capsule, *O. brinikhi* differs from the other four Far Eastern species in the very broad harpe base, which is similar to *O. carmelita*. The three Far Eastern species, *O. patricia*, *O. walakui* and *O. marumoi* have a narrower harpe base. *O. patricia* has the uncus with a bifurcated caudal process, while almost triangular in lateral view in *O. brinikhi*, *O. walakui* and *O. marumoi*. In terms of cornuti, *O. marumoi* is unique and the other four are on the line as stated above.

We summarize the relation of these species as follows. *O. carmelita* and *O. marumoi* are the two peripheral species with common hindwing venation and other each unique figures. *O. brinikhi*, *O. patricia* and *O. walakui* are the center species with common hindwing venation and common genital formation. *O. brinikhi* is near to *O. carmelita*. *O. patricia* and *O. walakui* are near. *O. marumoi* and *O. walakui* have diverged through different rout.

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## 摘要

小林秀紀・Vladimir V. Dubatolov・岸田泰則： *Odontosia carmelita-patricia* 種群（シャチホコガ科）の再検討と日本およびロシアからの2新種の記載

これまで日本のキテンエグリシャチホコは沿海州から記載された *Odontosia patricia* Stichel と同種とされていたが、日本のものは別種で2種に分かれ、北海道のものは *Odontosia walakui* Kobayashi, sp. nov. ホッカイエグリシャチホコ（新称）である。本州のものは *Odontosia marumoi* Inoue, stat. rev. コクシエグリシャチホコ（旧称復活）である。*O. walakui* sp. nov. は全体の色調は黒褐色で他の同属種と同じく、白色波状の内外横線にはさまれたより暗色のくさび状の中帯を示すが、これが前縁で狭まり翅頂より外横線までの距離が他種より長いことにより容易に同定される。触角はコクシエグリシャチホコに似て低い歯状で繊毛を伴うが *Odontosia sieversii* シーベルスシャチホコの両歯状と一見して区別できる。ゲニタリアでは第8腹板で簡単に区別できる。また西部シベリア・トランスバイカルから *Odontosia brinikhi* Dubatolov, sp. nov. (バイカルエグリシャチホコ 新称) を記載した。本種も *O. patricia* と外見は似ているがゲニタリアはむしろヨーロッパの *O. carmelita* に近い。シベリアでの分布上の知見、日本での分化に興味がある。