

Description of a New *Aphthona* Species from Japan (Coleoptera, Chrysomelidae, Alticinae)

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Abstract *Aphthona hakonensis* n. sp. is described from Honshu Is., Japan. Further *Longitarsus ihai* CHŪJŌ is newly synonymized with *Aphthona opaca* ALLARD. Accordingly 12 species of the genus are known to occur in Japan. A key to these species together with figures of male aedeagi is provided.

Key words. *Aphthona hakonensis*, new species, Japan, Alticinae, Chrysomelidae.

Japanese species of the genus *Aphthona* were revised by OHNO (1962, 1966) and KIMOTO (1994 a). KIMOTO (1994 b) further recorded *A. erichsoni* ZETTERSTEDT from Hokkaido. KONSTANTINOV and LINGAFELTER (2002) described *A. okinawaensis* from Ryukyu Is. and treated *A. yuasai* OHNO and *A. foudrasi* JACOBY as synonyms of *A. interstitialis* WEISE and *A. abdominalis* (DUFTSCHMIDT), respectively. Based on these works, ten species of the genus are now known to occur in Japan, namely *Aphthona abdominalis* (DUFTSCHMIDT), *A. amamiana* OHNO, *A. erichsoni* ZETTERSTEDT, *A. formosana* CHEN, *A. interstitialis* WEISE, *A. kurosawai* OHNO, *A. okinawaensis* KONSTANTINOV et LINGAFELTER, *A. perminuta* BALY, *A. semiviridis* JACOBY and *A. strigosa* BALY. In this short paper, I will give a description of a new species from Honshu. Further, *Longitarsus ihai* CHŪJŌ is synonymized with *Aphthona opaca* ALLARD.

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Aphthona hakonensis n. sp.

(Fig. 1)

Male. Body large and robust, 3.2 mm in length; lustrous black; head anteriorly with brownish tinge; legs largely brownish with 2 pairs of anterior femora more or less infuscate and posterior ones blackish; antennae brown, with 6th to 11th segments dark brown.

Head narrower than prothorax; vertex impunctate, rather angularly produced between frontal tubercles; frontal tubercles obliquely situated, flat and shining, roundly triangular, delimited by thin and deep furrows both anteriorly and posteriorly. Eyes small and widely separated from each other; distance between eyes almost 1.7 times as wide as longitudinal diameter of eye; distance between antennal sockets as wide as the socket; interantennal carina wide and raised on posterior half; frons flat on anterior half, almost straight at anterior margin, with short silvery hairs laterally; genae dull, covered with micro sculptures. Antennae somewhat robust, reaching middle of elytra, beyond 4th segment thickly pubescent; 1st segment robust,

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Fig. 1. Habitus of *Aphthona hakonensis* n. sp. (Holotype).

twice as long as wide; 6th to 10th each slightly widened to apex; 10th 2.5 times as long as wide; 11th longest and pointed, 1.3 times as long as 2nd; relative length of antennal segments as: 11th > 5th = 9th > 1st = 4th = 8th = 10th > 6th = 7th > 3rd > 2nd.

Prothorax subquadrate, 1.4 times as wide as long, subparallel-sided on basal half, thence weakly and roundly narrowed anteriorly, slightly produced at anterior margin, broadly and archedly produced at posterior margin; anterior angle broadly and obliquely truncate, posterior angle distinctly produced; disc evenly convex from side to side, very weakly depressed anteriorly to scutellum; surface shining, sparsely covered with shallow obscure punctures. Scutellum shining and trapezoid, almost twice as wide as long. Elytra 1.4 times as long as wide, widest at slightly anteriorly to middle; humeri well developed; disc weakly depressed along suture, rather sparsely covered with shallow, obscure punctures; interspaces with micro punctuation and micro sculpures; epipleura wide and subparallel-sided on basal 1/4, thence gradually narrowed posteriorly and disappearing at apical 1/7; surface of epipleuron somewhat wrinkled posteriorly. Prosternal

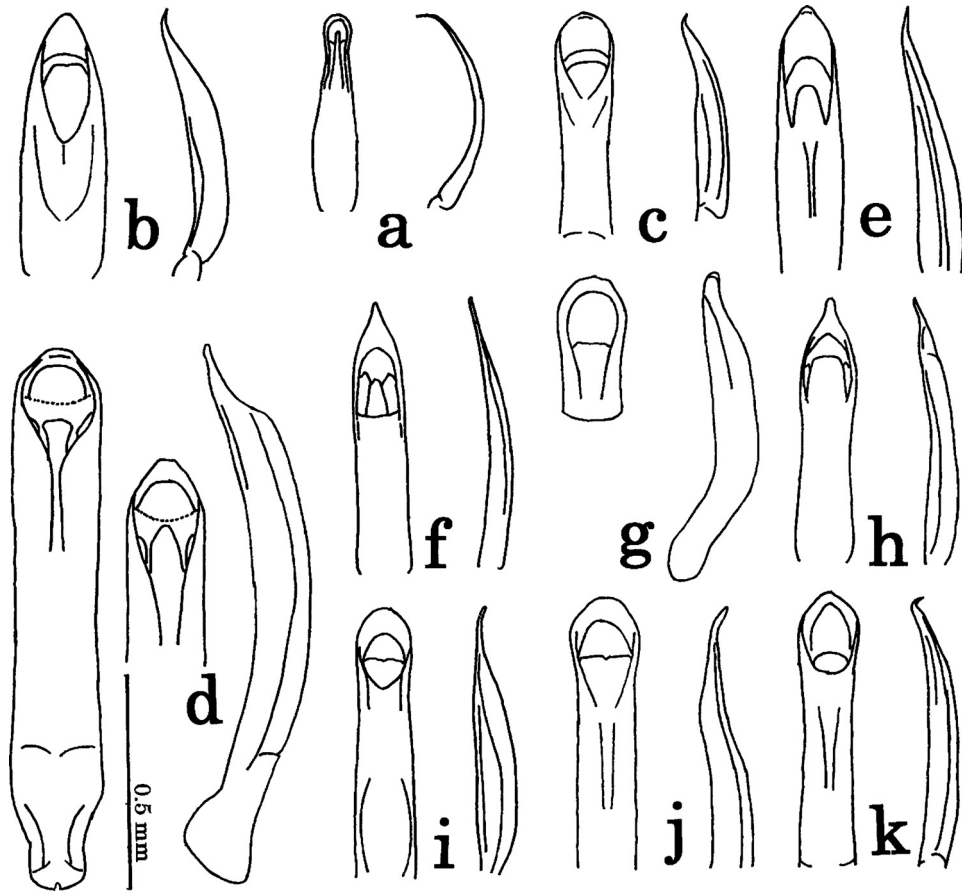


Fig. 2. Aedeagus of *Aphthona* species (left: dorsal view, middle: apical portion in lateral view, right: lateral view). — a, *A. abdominalis* DUFTSCHMIDT (from Nagai Park, Osaka); b, *A. erichsoni* ZETTERSTEDT (from Hosooka, Kushiro, Hokkaido); c, *A. formosana* CHEN (from Sumiyo dam, Amami Is.); d, *A. hakonensis* n. sp. (Holotype); e, *A. interstitialis* WEISE (from Miyagi V., Gunma); f, *A. kurosawai* OHNO (from Watarase, Nogi, Tochigi); g, *A. okinawaensis* KONSTANTINOV et LINGAFELTER (after KONSTANTINOV & LINGAFELTER; not to scale); h, *A. opaca* ALLARD (from Tungpu, Nantou Hsien, Taiwan); i, *A. perminuta* BALY (from Etigo-yuzawa, Gumma); j, *A. semiviridis* JACOBY (from Zinmuzi, Miura, Kanagawa); k, *A. strigosa* BALY (from Yorii, Saitama).

process roundly widened at apex, with sharp furrow along lateral margins; last visible abdominal sternite weakly tri-lobed. Aedeagus subparallel-sided with a pair of weak longitudinal carina medially on the venter, somewhat thickend at apex in lateral view (Fig. 2d); legs rather robust, fore and middle tarsi with 1st segment slightly widened to apex; hind tarsus with 1st segment shorter than 2nd and 3rd combined together.

F e m a l e: Body 3.2 mm in length, closely similar to male, but fore and middle tarsi with 1st segment slenderer; last abdominal sternite simple.

Type series. 2 males & 1 female (one male the holotype: SEHU, Hokkaido Univ., Sapporo), Mt. Myozin-dake, Hakone, Kanagawa Pref., Honshu, 15–VIII–1992, H. TAKIZAWA leg.; 1 female, ditto, 20–VIII–2006, M. MINAMI leg. (MINAMI collection, Tokyo); 1 female, Zyomin

Yukari, Nasu, Tochigi Pref., 15–VI–1997, H. TAKIZAWA leg.; 1 female, ditto, 10–VIII–1996, H. TAKIZAWA leg.

Remarks. This new species somewhat looks like *A. coerulea* (GEOFFROY) from Europa, but is clearly differentiated by its blackish color and weakly punctured elytra. Its relatively large and black body easily distinguishes this new species from most known congeners.

This new species was collected by sweeping at herbaceous fields of Mt. Myozin-dake (900 m asl.) and Zyomin Yukari (500 m asl.). Its host plant is not confirmed.

This species name is derived from its type locality, Hakone Spa in Kanagawa Prefecture.

Aphthona opaca ALLARD

Aphthona opaca ALLARD, 1889, 305 (Cambodia; Mus. Paris) – SCHERER, 1969, 78 (Cambodia, Vietnam, SW China) – TAKIZAWA, 1979, 346 (Taiwan and Japan) – KONSTANTINOV & LINGAFELTER, 2002, 136 (Cambodia, Vietnam, Thailand, Indonesia, Taiwan).

Luperomorpha sp.: TAKIZAWA, 1975, 56–62 (Ryukyu Is.: Ishigaki Is.)

Longitarsus ihai CHÛJÔ, 1958, 14 (Loochoo) – KIMOTO, 1994, 352 (Ryukyu Is., Taiwan) – **New Syn.**

TAKIZAWA (1975) recorded this species from Ishigaki Is. in the Ryukyu Archipelago as *Luperomorpha* sp. and later he (1979) identified it as *Aphthona opaca*. KIMOTO (1994 a) examined Taiwanese specimen and identified it as *Longitarsus ihai* CHÛJÔ. KONSTANTINOV and LINGAFELTER (2002) examined the same Taiwanese specimen and confirmed it as *opaca*. There is no doubt on the identity of *L. ihai* (sensu KIMOTO) and *A. opaca* (sensu TAKIZAWA or KONSTANTINOV). Further the original description by CHÛJÔ states as: “vertex and frons very finely but not so distinctly shagreened or alutaceous” and “(elytral) dorsum very finely alutaceous”. Since yellowish white body with finely shagreened dorsum is one of the main characters of *opaca*, I treat here *Longitarsus ihai* CHÛJÔ, 1958 as a junior synonym of *Aphthona opaca* ALLARD, 1889.

Key to Japanese Species of the Genus *Aphthona* CHEVROLAT (modified from KIMOTO, 1994 a)

- 1a Dorsal surfaces yellowish brown; elytra sometimes blackish brown along suture 2
- 1b Dorsal surfaces greenish to blackish blue or black with metallic luster 5
- 2a Frontal tubercle delimited behind by a distinct furrow 3
- 2b Frontal tubercle not clearly delimited behind by a distinct furrow; elytra impressed with strong punctures along sutural margin; body yellowish brown; antennae blackish brown with basal segments yellowish brown; aedeagus as in Fig. 2e; length 2.0–2.8 mm; host plants: *Iris ensata* THUNB., *Iris japonica* THUNB. *A. interstitialis* WEISE
- 3a Body lustrous yellowish to yellowish brown; elytra with interstices shining and smooth 4
- 3b Body pale yellowish white; elytra with interstices dull and finely granulate; aedeagus as in Fig. 2h; host plants unknown, possibly *Sapium japonicum* (SIEB. et ZUCC.) PAX et HOFFM. *A. opaca* ALLARD
- 4a Body yellowish brown including head; ventral surface and posterior femora blackish brown to blackish; four or five apical segments of antennae and scutellum blackish; aedeagus strongly curved down in lateral view (Fig. 2a); length 2.0 mm; host plants: *E. cyparissias* Linnaeus, *E. pseudochamaesyce* FISCH., MEY. et AVE-LALL, *E. esula*

- LINNAEUS, *E. paralias* LINNAEUS, *E. seguieriana* NECKER, *E. stricta* KOPS et van EMDEN and *Phyllanthus ussuriensis* RUPR. et MAXIM. *A. abdominalis* (DUSTSCHMIDT)
- 4b Body yellowish brown including head, ventral surfaces and posterior femora; antennae pitchy brown, with basal segments yellowish brown; aedeagus triangularly produced at apex (Fig. 2f); length 2.0–2.5 mm; host plants: *Euphorbia adenochlora* E. MORR et DECNE *A. kurosawai* OHNO
- 5a Elytra smooth on interspaces 6
- 5b Elytra finely and closely granulate and weakly punctate; dorsal surfaces dark green with slight cupreous shimmer; antenna piceous with four or five basal segments yellowish; ventral surfaces black; legs yellowish brown with posterior femur piceous; aedeagus acutely curved upward at apex (Fig. 2k); length 1.8–2.3 mm; host plants: *Mallotus japonicus* (THUNB.) MUELL. *A. strigosa* BALY
- 6a Pronotum covered with distinct and roundish punctures, with smooth interspaces; elytra more or less punctate 7
- 6b Pronotum covered with fine and oblong punctures, in most cases with longitudinally wrinkled interspaces; dorsal surfaces metallic blue, sometimes cupreous; antennae black with four basal segments yellowish brown; ventral surfaces black; legs yellowish brown, with posterior femora blackish; aedeagus acutely curved up at apex (Fig. 2c); length 2.0–2.3 mm; host plants: *Mallotus japonicus* (THUNB.) MUELL. *A. formosana* CHEN
- 7a Antennae and legs yellowish or reddish brown, at least hind femur blackish brown to black 10
- 7b Antennae and legs entirely yellowish to reddish brown 8
- 8a Head yellowish brown with vertex blackish brown; dorsum violaceous blue; head yellowish brown with vertex blackish brown; pronotum distinctly punctate; elytra rather subparallel-sided; length 1.8–2.2 mm; host plants unknown *A. amamiana* OHNO
- 8b Head unicolor 9
- 9a Dorsum including head blackish blue; pronotum almost impunctate; aedeagus stout and wide, gently narrowed to apex (Fig. 2b); length 2.2–2.5 mm; host plants: *Marchantia* sp., *Carex irrigua* (cited by KONSTANTINOV & LINGAFELTER) *A. erichsoni* ZETTERSTEDT
- 9b Dorsum blackish, with metallic blue luster; pronotum covered with distinct punctures; aedeagus broadly rounded with a small median denticle at apex (Fig. 2g); length 2.1–2.3 mm; host plants unknown (after original description) *A. okinawaensis* KONSTANTINOV et LINGAFELTER
- 10a Body robust and large, 3.2 mm in length; dorsum blackish; antenna on basal 5 segments brownish; legs brownish with more or less darkened femora; aedeagus almost straightly produced at apex in lateral view (Fig. 2d); host plants unknown *A. hakonensis* n. sp.
- 10b Body smaller, 2.0–2.5 mm in length; dorsum bluish or greenish with metallic luster 11
- 11a Frontal tubercle more or less transverse and subquadrate; dorsum dark greenish; prothorax generally weakly and sparsely punctate, with cupreous tinge; antennae and legs generally yellowish brown, except for hind femora dark brown; aedeagus more strongly curved upward at apex (Fig. 2j); length 2.0–2.5 mm; host plants: *Edogeworthis papyrifera* SIEB. et ZUCC., *Mallotus japonicus* (THUNB.) MUELL. *A. semiviridis* JACOBY
- 11b Frontal tubercle generally oblique and narrow; body dark green with bluish tinge on

dorsum; antennae and legs dark reddish brown to blackish brown, except for paler 2nd to 4th antennal segments, tibiae and tarsi; sometimes indistinguishable from *semiviridis* on variable coloration alone; aedeagus with a sharp longitudinal carina on venter (Fig. 2h); length 2.0–2.5 mm; host plants: *Castanea crenata* SIEB. et ZUCC., *Quercus serrata* THUMB., *Quercus mongolica* FISCH., *Alnus hirsuta* TURCZ., *Fagus crenata* BLUME, *Salix* spp., *Corylus heterophylla* FISCH., *Betula platyphylla* SUKATCHEV, *Carpinus tschonoskii* MAXIM., *Ulmus Davidiana* PLANCHON, *Rosa multiflora* THUNB., *Rosa Wichuraiana* CREP, *Sanguinosorba officinalis* LINNAEUS, *Prunus* spp., *Pourthiaea villosa* (THUNB.) DECNE, *Malus sieboldii* (REGEL) REHD., *Sorbus commixta* HEDL., *Rubus* spp., *Wisteria floribunda* (WILLD.) DC., *Kalopanax septemlobus* (THUNB.) KOIDZ., *Aralia elata* (MIQ.) SEEM, *Akebia quinata* (THUNB.) DECNE, *Acer mono* MAXIM.
 *A. perminuta* BALY

要 約

滝沢春雄: *Aphthona* 属の日本産 1 新種の記載 (鞘翅目ハムシ科)。—— 関東地方の低山地から *Aphthona hakonensis* n. sp. を記載した。本種は大型で黒色の種であり、日本産の同属種から容易に区別される。さらに *Longitarsus ihai* CHŪJŌ を *Aphthona opaca* ALLARD の新参異名と認め、本属の日本産 12 種への検索を示した。

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