

# Notes on the genus *Autographa* Hübner, subgenus *Chrysaspidia* Hübner (Lep., Noct.)

by

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## II. NOTES ON SOME OTHER SPECIES OF THE SUBGENUS

1. *Autographa (Chrysaspidia) festata* Graeser (plate 1, figs. 9—11).

*Plusia festata* Graeser, 1889, *Berl. ent. Z.* 33 : 262.

*Phytometra festata* Graes., ab. *conjuncta* Warren, 1913, in SEITZ, Groß-Schmetterl. der Erde I, 3 : 347, pl. 64 d fig. 2.

GRAESER described the species on the basis of three males and three females from the Amur Territory. In all these specimens the two discal spots are united. This is in accordance with my (rather limited) experience. All specimens I received from different museums under the name of *festata* which have separated discal silver spots did not belong to that species. The examination of the genitalia excluded any doubt. WARREN's ab. *conjuncta* is nothing but a synonym of the typical *festata*, as BRYK has already pointed out (1949 : 124).

WARREN figures a specimen with widely separated silver spots (l.c. fig. 1). I do not believe that this really belongs to *festata*, but to another species also occurring in the Amur District (cf. *A. (Chr.) manchurica*, p. 00).

The genitalia of both sexes were discussed when I compared *festata* with the new *gracilis* (cf. fig. 2 no. 7, and fig. 3 no. 3, p. 66 and 68). ICHINOSE figures the genitalia of Japanese specimens which he considers to belong to *festata* (1962, pl. I, fig. 3, ♂, and pl. VII, fig. 3, ♀). It is impossible that this determination is correct. In the ♂ the uncus is shorter than in *festata* and the cornutus is longer, while the bursa of the ♀ is quite different from that of *festata* and bears a much closer resemblance to the bursa of *festucae*.

I saw specimens from the following localities: Amur District (Zoöl. Mus. Amsterdam), Khabarovsk (on the confluence of Ussuri and Amur), Okeanskaya (Ussuri), Pompeyevka (on the Amur, Russian side, just opposite the Little Chingan Mts., now Siao Hingan Ling), Tjutju-ho, Sichote-Alin Mts. (all in Zool. Mus. Tring); Kasakevich (Ussuri) (Mus. Munich); Motojondo (Korea) (Naturhist. Riksmus., Stockholm). The earliest date is June 28th (Khabarovsk), the latest is August (no day given) (Tjutju-ho, Pompeyevka).

I have not seen specimens from Japan. The occurrence in that country has still to be ascertained.

2. *Autographa (Chrysaspidia) yokohamensis* Bryk (plate 2, figs. 3, 4)

*Phytometra festata yokohamensis* Bryk, 1949, *Ark. f. Zool.* 41 A (1) : 124, pl. V, fig. 6, ♂.

BRYK described a number of subspecies of *festata* and *festucae* without examining the genitalia. Through the courtesy of the staff of the Stockholm Museum I have been able to study them now. There can be no doubt whatever that

*yokohamensis* has nothing to do with *festata*. The genitalia of both ♂ and ♀ are quite different. The ♂ has a shorter uncus than *festata* and the cornutus is much longer (fig. 4, number 1). The bursa of the ♀ is of the *festucae* type, not of the *festata* type (fig. 5, number 5).

However I do not believe that *yokohamensis* is conspecific with *festucae*. Although the male genitalia are much smaller than those of *festucae*, the enormous cornutus is still larger than in the latter. The aedeagus is smaller and more strongly bent. The bursa of the ♀ is smaller and there is no trace of sclerotization. Because of all these differences I consider it a distinct species.

*A. yokohamensis* is very small. The span of the fore wings of the three specimens in the Stockholm collection ranges from 25—27 mm. It is therefore still smaller than *festata* (wing span of the specimens I could examine 24—29 mm). The head, patagia and collar have a yellowish colour. In the ♂ holotype the two discal spots touch each other, in the ♀ they are separated. In the third specimen, another ♂, they are confluent on the left fore wing and touch each other on the right wing. The antemedian is double in its lower half and the innermost discal spot touches it, just as in *festucae*. Hind wings and abdomen yellowish grey.

Only the ♀ has exact data on the label: Yokohama, 19.VII.1911, Lichtfang H. HOENE. (Mr. F. SMIT points out to me that there exist two towns of this name in Japan, one in the north-east point of Hokkaido, the other south of Tokyo).

### 3. *Autographa (Chrysaspidia) japonibia* Bryk (plate 2, figs. 1, 2)

*Phytometra festata* Graes., ab. *major* Warren, 1913, in SEITZ, Groß-Schmetterl. der Erde I, 3 : 347, pl. 64 c fig. 6.

*Phytometra festucae japonibia* Bryk, 1949, *Ark. f. Zool.* 41 A (1) : 125.

Here again I think that we are dealing with a good species, not with a subspecies of *A. festucae* and still less with a form of *A. festata*. Just as in *A. yokohamensis* the head, collar and patagia are yellow, but *japonibia* is much larger. The three specimens I could examine have a fore wing span of 32—36 mm.

The silver spots of the fore wings are much better developed than in *festucae*. The lowest apical silver spot is shorter and broader, the third occupies the whole space between postmedian, subterminal and the two nervures and even the second is more strongly powdered with silver scales than in *festucae*. The two discal spots are distinctly larger than in the latter. The antemedian is single, so that the innermost silver spot does not touch it. Hind wings and abdomen brownish grey.

The genitalia differ in the following particulars: the cornutus of the ♂ is very long and slender (fig. 4, numbers 2, 3, 4), the sclerotization on the plate of the bursa of the ♀ is much stronger than in *festucae* (fig. 5, number 6).

The ♂ holotype of *A. japonibia* has the following data: Yokohama, 24.V.1911, Lichtfang H. HOENE, and the ♀: the same particulars, except that the date is 18.V.1911. A specimen from the Munich collection only has the name of the locality on the label: again Yokohama. And the label of the holotype of WARREN's ab. *major* merely mentions the name of the country: Japan.



(One might think that *yokohamensis* and *japonibia* are merely two generations of the same species. The yellow head etc. and the difference in flying time of about two months would support this presumption but on the other hand the large difference in size, the differences in the antemedian and in the colour of abdomen and hind wings, the difference in shape of the aedeagus, which moreover, is considerably smaller in *yokohamensis* whereas the cornutus is nearly as large, and the differences in the bursa of the females could refute this presumption).

#### 4. *Autographa (Chrysaspidia) manchurica*, nov. sp. (plate 2, figs. 5—7)

Mr. W. H. T. TAMS sent me a few specimens of a *Chrysaspidia* from Manchuria from the OBERTHÜR collection, as possible representatives of *A. festata*. All are males. A preparation of the genitalia at once shows that they do not belong to that species and I cannot identify them with any of the described species of the subgenus.

Span of the fore wings 33—34 mm. Ground colour of the fore wings gold-brown, strongly powdered with yellow along the basal part of the costa and along the inner margin (the same colours as we find in many specimens of European *festucae*). The two large discal silver spots as in *A. festucae*, not touching each other. The apical spots more pronounced than in that species and the fourth is shorter and broader while the third in two of the specimens is also fully coloured with silver. Hind wings pale yellowish or brownish grey (paler than in *festucae*), with two indistinct darker lines. Head, collar and patagia rust-red.

Genitalia of the ♂: ampulla longer than in *festucae*, aedeagus bent, narrowed in the middle, cornutus long. Cf. fig. 4, number 5.

Holotype: ♂, Siddemi (Manchuria), 1882, M. JANKOWSKI leg., in collection British Museum (Natural History).

Paratypes: two males with the same data.

I received from the Zoological Museum at Tring a ♂ from Raddefka (Amur Territory), 8.VIII.1910, W. MAU leg., which shows exactly the same pronounced apical silver markings as the specimens from Siddemi and which corresponds with them in all colour details. Its genitalia show the same long ampulla and though the shape of the aedeagus is not exactly the same, it is also narrowed in the middle and strongly bent. Cf. fig. 4, number 6. I am convinced that this specimen (figured plate 2, fig. 7) belongs to the same species.

#### 5. *Autographa (Chrysaspidia) festucae kamtschadala* Bryk (plate 2, fig. 8)

*Phytometra festucae kamtschadala* Bryk, 1949, *Ark. f. Zool.* 41 A (1): 125.

BRYK described this subspecies from one ♂ from Kamchatka, characterised by the dark ground colour of the fore wings and the dark hind wings. It differs from specimens of the European *festucae* by a distinct brown tint in the ground colour of the fore wings. The silver markings are exactly like those of *festucae festucae* except that the large discal silver spot is divided by a dark line of the ground colour along the cubitus. The specimen is smaller than the majority of the nominate form, the span of the fore wings being only 33 mm.

The genitalia show the following differences: the uncus is shorter, but most striking is the very thin clavus without club-shaped thickening of the top. Cf. fig. 5, number 3.

A longer series will of course show whether all these rather minor differences are stable or not.

6. *Autographa (Chrysaspidia) festucae kurilensis* Bryk (plate 2, fig. 9)

*Phytometra festucae kurilensis* Bryk, 1949, Ark. f. Zool. 41 A (1): 125.

BRYK described this subspecies also from a single specimen. According to him it is characterised by a pale sienna-red head and collar (but the same colour is often found in European *festucae*) and by the shape of the innermost of the two discal spots of the fore wings. This spot is higher than in the nominate form of *festucae*. However, in my opinion the same holds good for the outer one of the two spots, whereas the row of apical spots is also better developed than in *festucae festucae*. As a result the silver markings practically correspond with those of *japonibia*. The specimen has a wing span of 35 mm.

The genitalia strongly resemble those of *festucae festucae*. The clavus is somewhat longer. The aedeagus not only contains the cornutus, but also the less sclerotized bar which I found in *festucae*, only in the *kurilensis* specimen it is double-peaked (cf. fig. 5, number 1).

Among the material I received from the Zoological Museum at Tring is a specimen from Okeanskaya (Ussuri) which exactly agrees in wing markings and colour with BRYK's holotype, but it is smaller (span of fore wings 31 mm). In this male the bar is also present in the aedeagus, but it is single, as I found it to be so in the Dutch *festucae* (cf. fig. 5, number 2). It is of course impossible to ascertain the status of this specimen (figured on plate 2, fig. 10), but it is at any rate clear that this part of Siberia is inhabited by at least three species of the subgenus *Chrysaspidia*.

7. *Autographa (Chrysaspidia) festucae*, subsp.? (plate 2, figs. 11, 12)

From the Munich Museum I received two males from the Japanese island of Hokkaido which do not agree with any of the species or subspecies I have seen from that country. They are smaller than the nominate form of *festucae* (span of the fore wings of the larger one 29 mm, of the smaller one 25 mm), but the ground colour of the fore wings is the same gold-brown as in our Dutch *festucae*. The shape of the two discal spots resembles that of the preceding subspecies, but the apical ones are like those of the Dutch *festucae*. The head and collar are pale rusty-red without becoming yellow.

Locality: Asahi-Mura, Hokkaido, 12.VII and 4.IX.1956.

The shape of the valves is the same as in the nominate form of *festucae*, the cornutus is a little shorter than in the latter. Cf. fig. 5, number 4. Here again the material is too scanty to base any conclusion on it.

8. Finally I received a ♀ from the Tring collection, the label of which only bears the word Japan. No exact locality, no date. It closely resembles the Dutch





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Fig. 1, 2. *Autographa japonibia* Bryk. 1. ♂, Yokohama, 19.VII.1911 (holotype); 2. ♂, Yokohama. Fig. 3, 4. *Autographa yokobamensis* Bryk. 3. ♂ (holotype); 4. ♀, Yokohama, 19.VII.1911. Fig. 5—7. *Autographa manchurica*, nov. sp. 5. ♂, Siddemi, 1882 (holotype); 6. ♂, Siddemi, 1882; 7. ♂, Raddefka, 8.VIII.1910. Fig. 8. *Autographa festucae kamtschadala* Bryk, ♂, Kamchatka (holotype). Fig. 9. *Autographa festucae kurilensis* Bryk, ♂, Island Kunashiri Tomari (holotype). Fig. 10. *Autographa festucae* L., subsp. ♂, Okeanskaya, 3.VII.1908. Fig. 11, 12. *Autographa festucae* L., subsp. 11. ♂, Hokkaido, Asahi-Mura, 12.VIII.1956; 12. ♂, same locality, 4.IX.1956. 13. *Autographa* sp., ♀, "Japan".



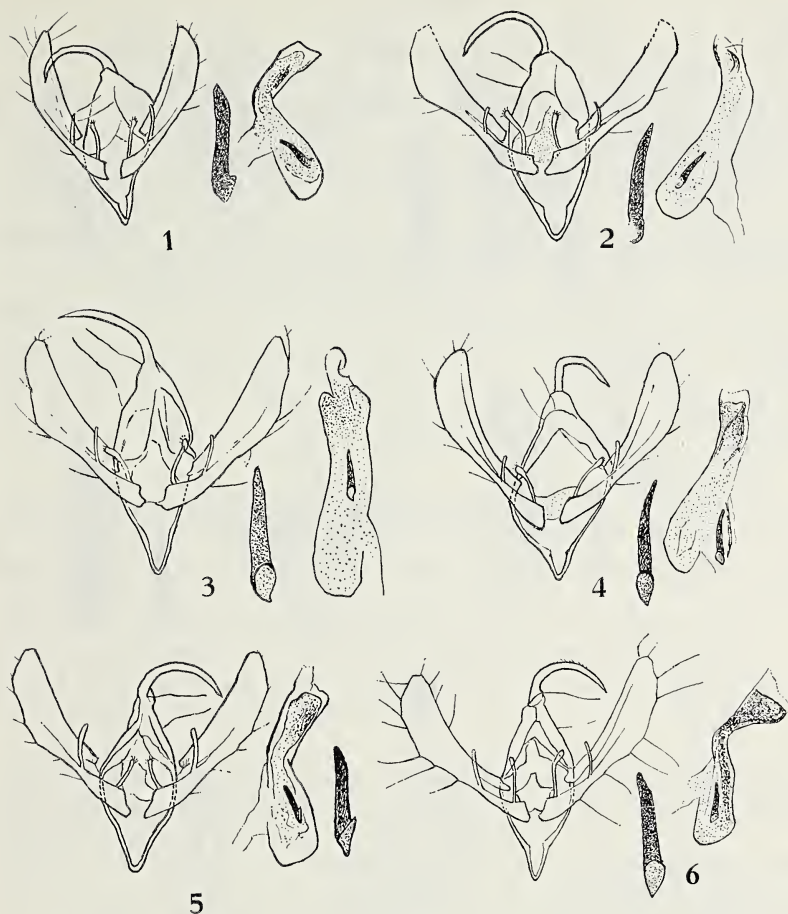


Fig. 4. Male genitalia. 1. *Autographa yokohamensis* Bryk (holotype) (slide 905); 2. *Autographa japonibia* Bryk (holotype) (slide 907); 3. ab. *major* Warren (holotype) (prep. Brit. Mus., Nat. Hist.); 4. prep. 902 (collection Museum Munich); 5. *Autographa manchurica*, nov. sp. (prep. 893); 6. specimen from Raddefka (prep. 945).

*festucae* in colour and markings with one exception: the head and collar are yellow as in *japonibia* and *yokohamensis*. Span of the fore wings 31 mm. Cf. plate 2, fig. 13.

The genitalia are of the *festucae* type, but they are very small, much smaller even than those of *yokohamensis*, although the specimen is larger. This difference in size does not only hold good for the bursa, but also for the ostium. There is no clerotization on the plate of the bursa. Cf. fig. 5, number 7. I do not venture to pronounce a decision on the status of this specimen.

#### Acknowledgements

In concluding this article I should like to thank all those who have assisted me in one way or another: the members of the staff of the British Museum

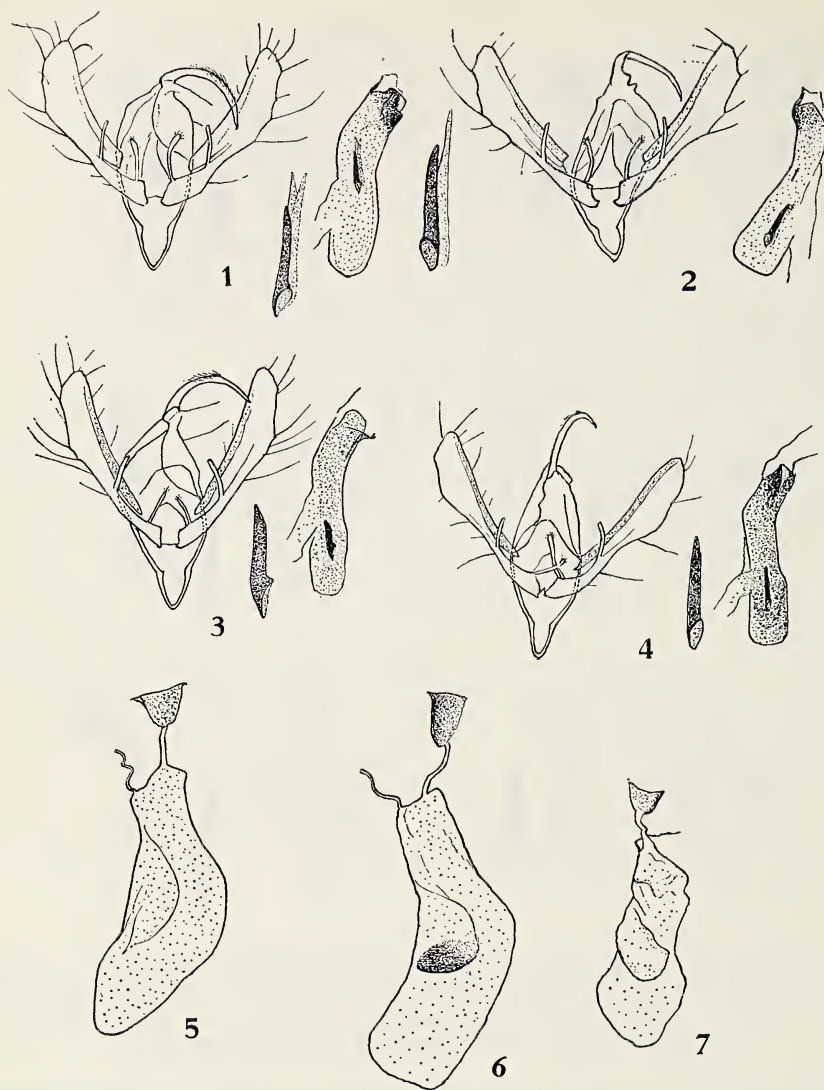


Fig. 5. Male genitalia. 1. *Autographa festucae kurilensis* Bryk (holotype) (prep. 944); 2. specimen from Okeanskaya (prep. 943); 3. *Autographa festucae kamtschadala* Bryk (holotype) (prep. 946); 4. *Autographa festucae* L., subsp. from Hokkaido (prep. 943). Female genitalia. 5. *Autographa yokohamensis* Bryk (prep. 906); 6. *Autographa japonibia* Bryk (prep. 914); 7. *Autographa* sp. (specimen from the collection of the Zoological Museum at Tring) (prep. 917).

(Natural History), of the Zoological Museum at Tring, of the Naturhistoriska Riksmuseet in Stockholm, of the Zoologische Sammlung des Bayerischen Staates, Abt. für Entomologie (Munich); Dr. Ch. DUFAY for the loan of the article by ICHINOSE, Mr. F. G. A. M. SMIT and Mrs. L. M. WRIGHT for carefully checking the English text, and Mr. J. HUISENGA for his assistance in making the scale drawings and the photographs and in composing the two plates.



## Literature

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Tweede Nederlandse exemplaar van *Hemerophila abruptaria* Thunberg (Lep., Geom.). Op 29 augustus 1965 zag ik een exemplaar van deze soort, dat dood in een etalage lag. Natuurlijk ging ik de winkel in om te vragen, of ik de vlinder mocht hebben. Hoewel de eigenaar me zeer terwille was, kon hij toch niet onmiddellijk aan mijn verzoek voldoen, maar moest ik wachten, tot de etalage uitgeruimd zou worden. Dat gebeurde pas op 11 oktober. Ook dit exemplaar bleek weer een ♂ te zijn. Toen ik het voor het eerst zag, had het zeker nog niet lang in de etalage gelegen, daar ik geregeld de winkelramen afzoek naar vlinders.

C. OTTENHEIJM, Roermondseweg 112, Steijl.

Mededelingen van het Secretariaat. De Antwerpse Entomologische Vereniging, Secretariaat Georges MYNCKE, Walenstraat 27 te Antwerpen, organiseert in de naaste toekomst enkele excursies, waaraan ook onze leden kunnen deelnemen.

Zondag 15 mei: Excursie naar het Hageland (Demerdal). Leiding. H. VANNEROM.

Zondag 26 juni: Bezoek aan de Dolomithellingen van Franchimont. Wandeling langs de Chinelle (bijrivier van de Hermeton) en in de buurt van Vodelée-Romedenne. Leiding: J. E. DE LANGHE.

Zondag 14 augustus: Oostvoorne, onder leiding van F. FABRY.

Zondag 4 september: Studiewandeling in het Land van de Waas. Leiding: Eerwaarde Heer DE MULDER.

Aanmeldingen voor deze interessante excursies aan het Secretariaat te Antwerpen, waar ook nadere inlichtingen verstrekt kunnen worden.

Voorts: Aangeboden een in goede staat zijnde microscoop voor determinatiedoeleinden, compleet met toebehoren in kist.

Te bezichtigen of te bevragen bij Mevr. A. VAN ROON, Dragonstraat 27 te Arnhem. Tel. 08300-31571.

W. HELLINGA, Secretaris.

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