Hypocoena dispersa n. sp. (Lep., Noctuidae) from Iceland

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During his travel in Iceland in 1937, studying geology, A. Nørvang collected some insects at random.

On the shores of Kópasker, a locality situated at nearly the northernmost point of Iceland (66°20′N., 29°00′E.) he took (on 2nd September) a somewhat worn specimen of a noctua, the identification of which has caused severe difficulties. Its forewings are little characteristic, blackish coloured, apparently without any wing markings, and the shape of its genitalia (♂) was unfamiliar to me.

Having sent the specimen in question including the genital slide to the British Museum (Natural History) in London asking if Mr. H. W. T. Tams would be kind enough to assist, I got the reply that the specimen beyond any doubt belonged to the genus *Hypocoena* Hampson, and probably to *rufostrigata,* a species described by Packard (1868 p. 36) in the genus *Leucania* Hb. Mr. Tams included a photograph illustrating the Icelandic specimen in company with two *Hypocoena rufostrigata* of Canadian origin as well as a photograph of the male genitalia of the last-named species.

The genus *Hypocoena* which was erected by Hampson (1910 p. 301—302) for *rufostrigata* Pack. alone (misspelled by Hampson as *rufostriga)* at present covers 6 species, all occurring in northern parts of North America ranging from Labrador westwards to Alaska, and south in the west to Utah and California. The genus is not known from Europe. It is closely allied to *Coenobia* Stph. — the neuration is almost identical — but differs e.g. by the smooth rounded frons lacking the corneous pointed plate at middle and

flattened plate below it, conspicuous in *Coenobia*.

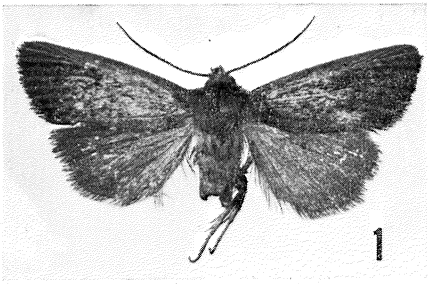
While treating the Icelandic *Lepidoptera* for the work "The Zoology of Iceland" I undertook a renewed study of the specimen. Examination of material of *Hypocoena rufostrigata* Pack., *basistriga* McDunn., *inquinata* Gn., and *defecta* Grt., obtained for comparison through Dr. D. F. Hardwick of the Department of Agriculture in Ottawa, disclosed that none of the three last-named species exhibited any conformity with the Icelandic specimen.

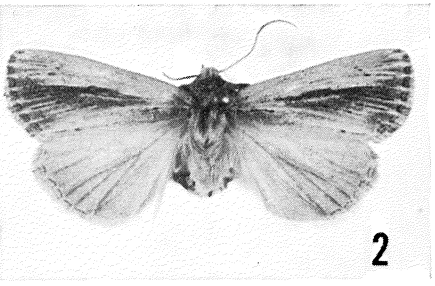
As to the two still remaining *Hypocoena* species, *orphinia* Dyar, and *variana* Morr. (not represented in the collection in Ottawa), Dr. E. L. Todd of the United States Department of Agriculture in Washington, D.C. deliberately dissected two syntypes of *orphinia*, demonstrating this species to be very distinct from all other described species of *Hypocoena* and from the species from Iceland. Regarding *H. variana*, its specific status seems not quite clear. The type is apparently lost, the specimen standing in the collection in Washington as *variana* exhibited on dissection an aedeagus like that of *inquinata* depicted in fig. 6, and the specimen illustrated by Holland (1905, pl. 26, fig. 26) as (*Tapinostola*) *variana* (figured from the collection of the United States National Museum) now — according to Dr. Todd — stands as *Hypocoena inquinata*.

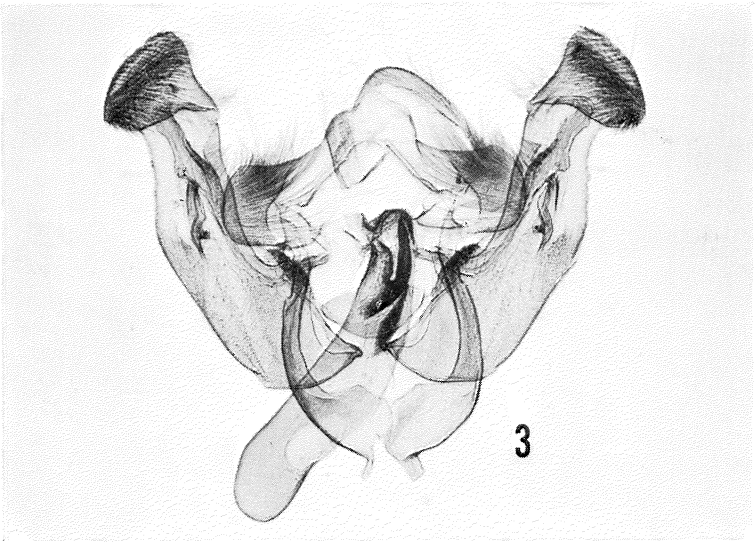
The only described *Hypocoena* species approached by the Icelandic is *rufostrigata*. The neuration, the head (frons), the palpi, and the legs agree. The genitalia of these two are in fact also rather similar (plate I, figs. 3—4) but in general appearance the moths look widely different. The Icelandic specimen (plate I, fig. 1) is stout, has pointed blackish forewings and dark hindwings. The Canadian species (plate I, fig. 2) is slender, forewings wider with a dark central streak broadening out towards the outer margin but otherwise light coloured. A fine picture of *Hypocoena rufostrigata* is shown by Holland (1905, pl. 19, fig. 27) under the name of *Caradrina punctivena* Smith.

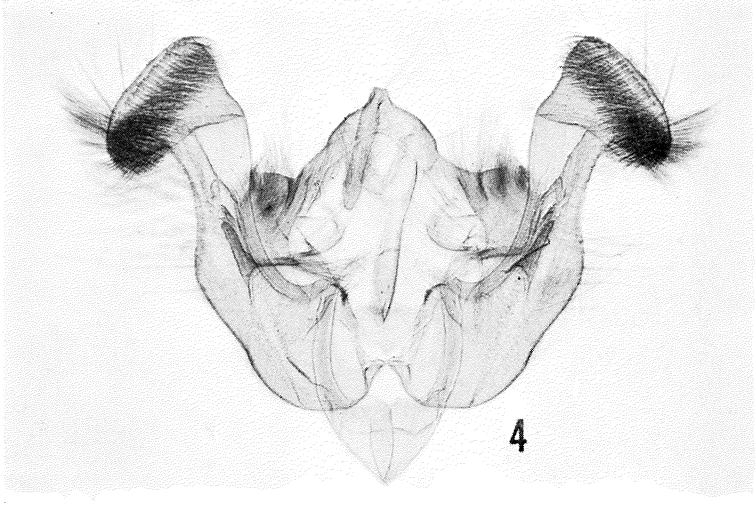
PLATE I

Fig. 1: *Hypocoena dispersa* n. sp., holotype (× 2). — Fig. 2: *Hypocoena rufostrigata* Pack. (× 2). Canada, Bradore Bay, Quebec 12. VIII. 1930. W. J. Brown leg. — Fig. 3: Genitalia of same specimen as shown in fig. 1 (× 20), prep. NLW 1830. — Fig. 4: Male genitalia of *Hypocoena rufostrigata* Pack. (× 20). Canada, Sunnydale, Lloydminster, Alberta 26.VI.1941. P. F. Bruggemann leg., prep. NLW 2402.









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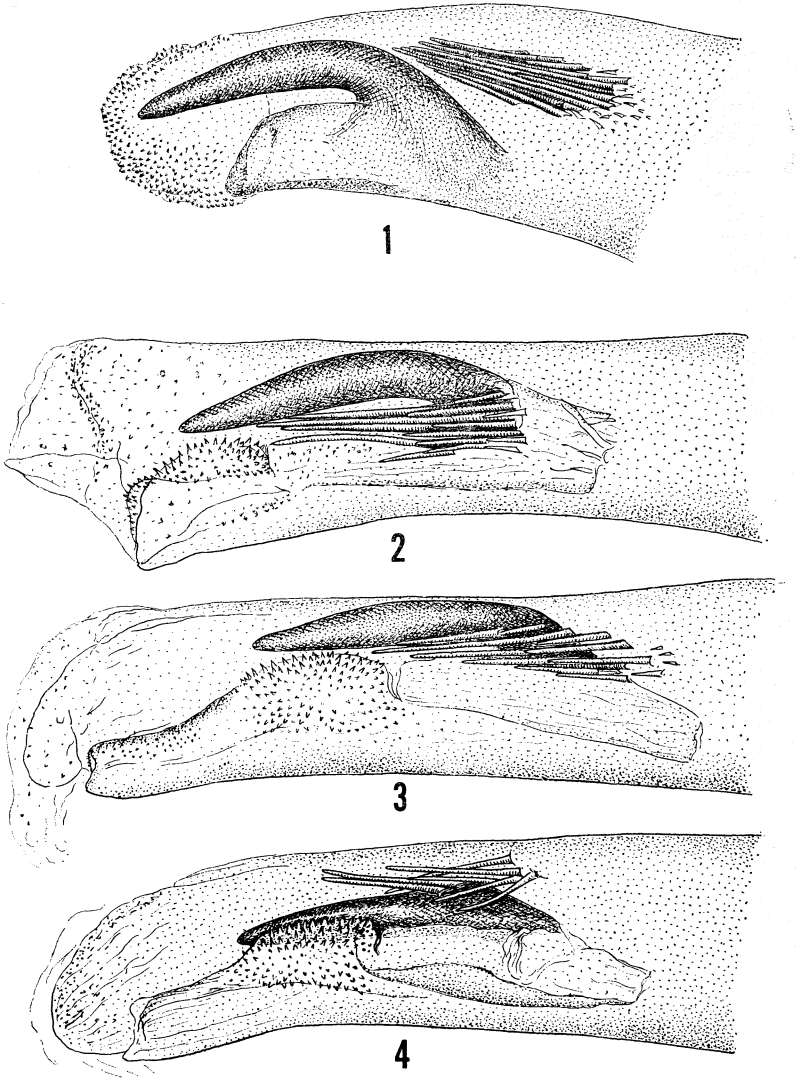
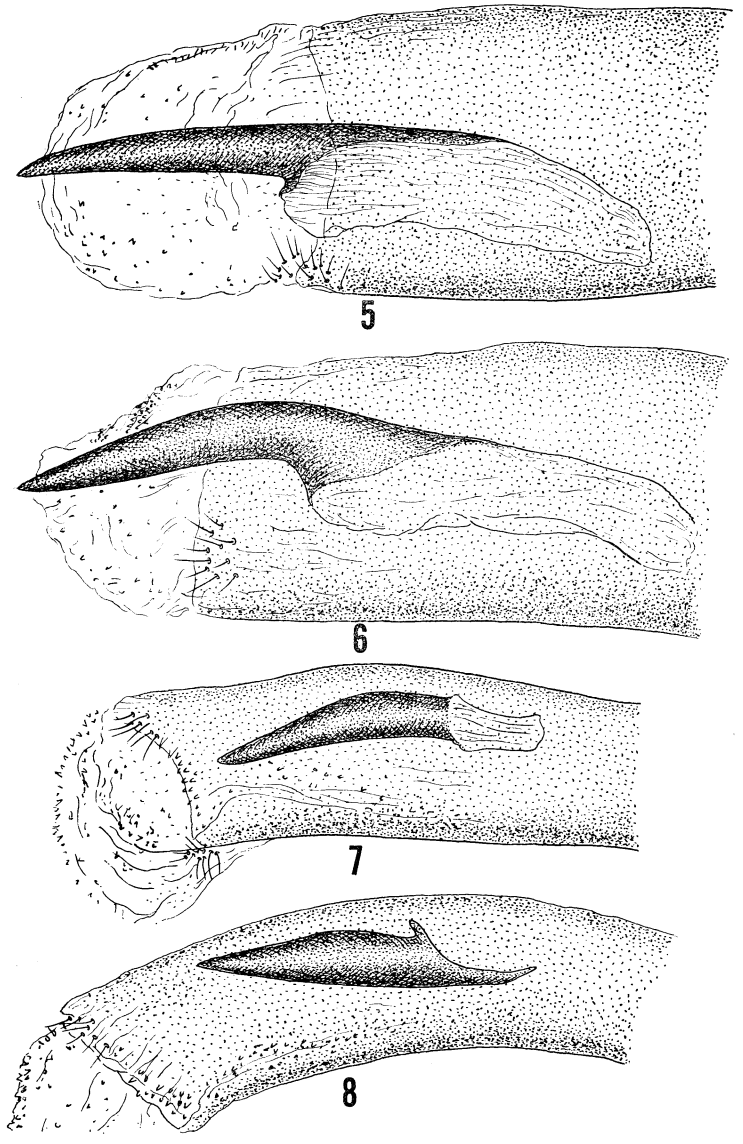
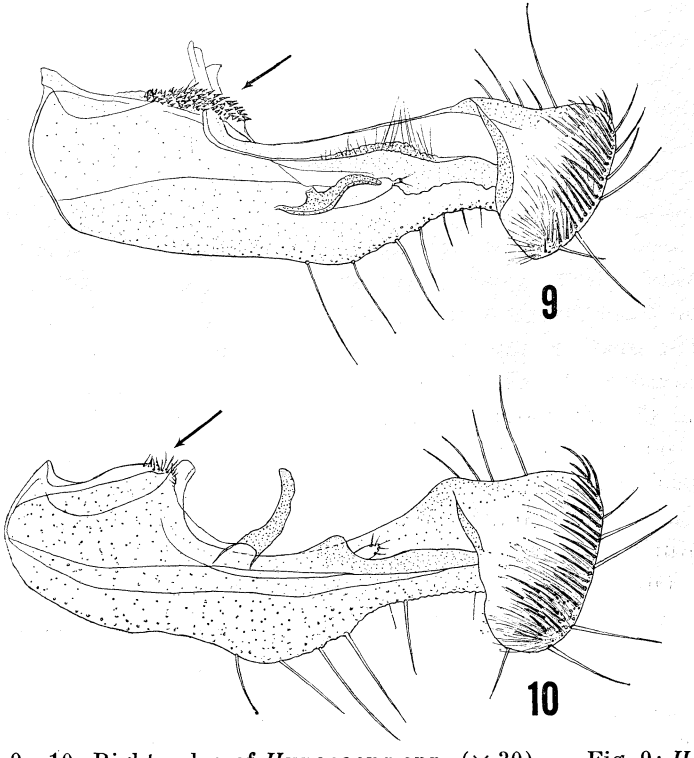


Figs. 1—4: *Hypocoena spp.* Distal part of aedeagus with cornuti (× 70). — Fig. 1: *H. dispersa* n. sp:, holotype, prep. NLW 1830. — Fig. 2: *H. rufostrigata* Pack. Canada, Sunnydale, Lloydminster, Alberta 26.VI.1941. P. F. Bruggemann leg., prep. NLW 2402. — Fig. 3: *H. rufostrigata* Pack. Canada, Bradore Bay, Quebec 12.VIII.1930. W. J. Brown leg., prep. 2403. — Fig. 4: *H. rufostrigata* Pack. Canada, Rutland, Saskatchewan 15.VII.1940. A. R. Brooks leg., prep. NLW 2401.



Figs. 5—8: *Hypocoena spp.* Distal part of aedeagus with cornutus (× 70). — Figs. 5: *H. inquinata* Gn. Canada, Saskatoon, Saskatchewan 1.VII.1937. Kenneth M. King leg., prep. NLW 2400. — Fig. 6: *H. inquinata* Gn. Canada, Saskatoon, Saskatchewan 12.VII.1937, Kenneth M. King leg., prep. NLW 2399. — Fig. 7: *H. basistriga* McDunn. Canada, Sunnydale, Lloydminster, Alberta 10.IX.1948. P. F. Bruggemann leg., prep. NLW 2397. — Fig. 8: *H. basistriga* McDunn. Data as in fig. 7, prep. NLW 2398.

The armature of aedeagus of the two species mentioned looks but little different (figs. 1—4) especially compared to that in e.g. *inquinata* (figs. 5—6) and *basistriga* (figs. 7—8), but other genital characters, such as the structure of the valva differ definitely. In *rufostrigata* the cucullus is larger and the clasper far longer and movable. The photograph (plate I, fig. 4) shows the clasper in its normal position whereas fig. 10 shows it bent upwards. The central area of the valva also differs and especially the shape of the ampulla is clearly distinct from that in *rufostrigata*. Judging from four preparations of the male genitalia of *rufostrigata* the shape of the clavus represents a characteristic difference, as indicated by the arrow in the drawings (figs. 9—10). In *rufostrigata* the clavus forms a short projection, set with weak hairs, in the Icelandic specimen the clavus is broad, build up by a series of small stout spines.



Figs. 9—10: Right valva of *Hypocoena spp.* (× 30). — Fig. 9: *H. dispersa* n.sp., holotype, prep. NLW 1830. — Fig. 10: *H. rufostrigata* Pack. Canada, Rutland, Saskatchewan 15.VII.1940. A. R. Brooks leg., prep. NLW 2401.

Although merely one specimen is available I consider it necessary to regard it as belonging to a new species: *Hypocoena dispersa,* the specific characters of which are given above. The holotype (N. Iceland, Kópasker 2. IX. 1937, A. Nørvang leg.) belongs to the Zoological Museum of Copenhagen.

It is most difficult to set forth a probable explanation of the presence of this individual in Iceland. The supposition that it may belong to an indigenous Icelandic population seems little probable. More likely it is — like the other *Hypocoena* species — a native of North America, having by some means landed in this remote area.

Although incidental transport by human activity of the specimen from e.g. Canada to just that part of Iceland can be left out of consideration, it may very well have been transported from its native soil through the air. Quite a series of species, such as, e.g. *Herse convolvuli* L., *Mythimna unipuncta* Haw., *Orthonama obstipata* F., *Nomophila noctuella* Den. & Schiff., and *Udea ferrugalis* Hb. found at intervals in Iceland have undoubtedly been transported from their habitat far away (as far as more than 1500 miles) by air-currents. The species mentioned have all travelled from the south northwards, but the probability of eastwards dispersal also exists. The presence of some specimens of *Nomophila noctuella* on the west coast of Greenland in 1954 is interpreted by Mikkola (1968 p. 509—510) as the result of air-born transportation from North America to Greenland by a warm air-current.

The weather maps issued by the Danish Meteorological Institute demonstrate that on 29th August 1937 a warm air-current moved from Canada across Greenland directly towards Iceland, where the temperature was 7° C. The specimen may have reached Kópasker this way.

I am greatly indebted to Mr. H. W. T. Tams, British Museum (Natural History), to Dr. D. F. Hardwick, Department of Agriculture, Ottawa, and to Dr. E. L. Todd, United States Department of Agriculture, Washington, D.C., for their helpful collaboration.

Summary

A specimen of the genus *Hypocoena* Hamps., known exclusively from Canada, caught in the northernmost part of Iceland belongs to a new species described under the name *H. dispersa.* It is compared to other *Hypocoena spp.,* especially *rufostrigata* Pack. Its presence in Iceland may be explained as a result of transportation from Canada by air-currents.

References

Hampson, G. F., 1910: Catalogue of the Lepidoptera Phalænæ in the British Museum. 9. London.

Holland, J. W., 1905: The Moth Book. New York.

Mikkola, K., 1968: Transportation by Air of Nomophila noctuella Schiff. (Lep., Pyralidae) to Greenland from North America in 1954. — Entom. Medd. 36.

Packard, A. S., 1868: View of the Lepidopterous Fauna of Labrador. — Proc. Boston Soc. Nat. Hist. 11. (1866—68).

Anmeldelse

N. P. Kristensen: Systematisk Entomologi. Kbh. (Munksgaard) 1970, 173 sider, 41 underafdelte figurer. Pris: 45 kr.

Undertiden kan en ydre foranledning og et pres afstedkomme et godt resultat. De zoologistuderende skal nu lære invertebratzoologi efter Barnes' amerikanske lærebog, men Barnes sjofler bevidst entomologien — i Amerika hedder det jo »zoology *and* entomology«. Boas-Thomsens entomologiske afsnit er for stærkt præget af veneration, Lindroths »Entomologi« fra 1967 er også gammeldags i snittet, og altså opfordrede man museets insektafdelings yngstemand, lige ansat, til at skrive en lærebog i systematisk entomologi for de studerende, der ikke skal have entomologi som hovedfag. Pres var der på, den skulle foreligge i løbet af nogle måneder, ved kursus' begyndelse!

Man ville heri kunne fristes til at søge en undskyldning, men bogen behøver ingen undskyldning. Det er et ualmindelig helstøbt arbejde, der er kommet ud af det, og en bog der i så høj grad er med på det nyeste, at man næsten taber pusten. Den har måske som lærebog en fejl, anm. også andetsteds har anket over: den er for koncentreret, for knap i stilen. At lære en bog, hvor faktisk hver sætning skal kunnes, er ingen spøg; lidt dyppelse skal der til for at få de tørre facts til at glide ned. Så anm. misunder ikke den student, der ikke selv må få lov at udtrække af stoffet, men højst få nogle indskudte sætninger med petit, som han får lov at glemme (ofte er det forøvrigt netop dem, der bliver hængende). Men sådan er tiderne nu, og forf. har måttet rette sig derefter.

Det er en helstøbt bog, præget af forf.'s uhyre viden; men den får i sit tvungne oplæg en lille smule slagside: Universitetet ønsker, at de studerende ikke-entomologer skal kende mere til de afvigende smågrupper end til de store »klassiske«, og også det har forf. naturligvis måttet indrette sig på. Men derved kommer også det for insekternes udvikling spændende frem; hovedpunkterne i insekternes udvikling kommer klarere til deres ret, når embiopterer, proturer, strepsipterer