
[Read 1st June, 1874.]

**Fam. NYMPHALIDÆ.**

**Subfam. DANAINE.**

**Genus EUPLŒA, Fabricius.**

*Euplœa magnifica, n. sp.*

♀? Wings above bright sepia brown; primaries shot with vivid blue; subapical area densely irrorated with lilacine; a conspicuous subcostal white spot; a second within discoidal cell, and a third on second median interspace, forming together a triangle; a minute whitish point on lower discoidal interspace, and another on first median interspace; secondaries with a double series of ill-defined, disco-submarginal, pale-ochraceous spots from third median branch to anal angle; body black, white-spotted in front; wings below rich chocolate-brown; primaries with three white spots as above, a fourth oval spot on first median interspace; a small point between lower discoidal and third median nervures, a subapical point, one submarginal on second median interspace, five nearly marginal points from third median branch to external angle, and some anal-marginal dots on the fringe, whitish; secondaries with a spot near end of cell, and five unequal spots in a semicircle round extremity of cell, pearly-white; a double submarginal series of yellowish-white spots; fringe dotted with whitish; body black; thorax white-spotted; expanse of wings 4 inches.

_Hab._—Thibet. One specimen.
Subfam. Satyrinæ.

Genus Euptychia, Hübner.

1. Euptychia peculiaris, n. sp.

♂ Wings above brown; a paler line close to margin; margin black-brown; secondaries with a zigzag submarginal line; body blackish: wings below paler; a zigzag submarginal line; a line close to margin, and the margin itself, black-brown; two irregular dark-brown central lines; the disc greyish, with a central nebulous pale-brown band; secondaries with two conspicuous, black, obliquely placed, subapical ocelli, white-pupilled with ochraceous irides; outer central line forming an angle at third median branch; body greyish: expanse of wings 2 inches, 1 line.

Hab.—Minas Geraes.

This species may at once be recognized by the two isolated ocelli, near apex of secondaries on under surface.

2. Euptychia stelligera, n. sp.

♂ Wings above dark brown; body blackish: wings below dark brown, with two central, nearly parallel, irregular, blackish lines; a zigzag submarginal black-brown line, with paler external edge; outer margin black; fringe greyish-brown; a discal series of whitish-ochraceous dots, those on secondaries larger than on primaries, one near costa of secondaries largest; secondaries indistinctly irrorated with pale-brown scales; an indistinct dark-brown line close to margin: body dark brown: expanse 2 inches, 3 lines.

Hab.—Minas Geraes.

Closely allied to E. Quantius.

3. Euptychia Angelica, n. sp.

♂ Wings above azure-blue, form of E. Junia; primaries with apex, apical costa, outer margin and apical nervures blackish-grey; a shining (rubbed in appearance) brown streak from base to apex, running along the median nervure and then widening; inner margin very convex; secondaries with costal area to discoidal nervure blackish, with vivid, dark, metallic-green reflection; apical margin and a fine submarginal line blackish: body greyish-brown, centre of thorax blue: wings below azure-blue; markings very similar to those of E. Doris; two central dark brown
bars; a discal streak, a discal submarginal line, a waved line close to margin, and the margin itself, dark brown; primaries with central bands, discal streak, and submarginal line only extending half across the wing; a well-marked subapical ocellus of the normal type; internal area greyish; secondaries with two subapical and two subanal, unequal ocelli; body dirty whitish: expanse 1 inch, 11 lines.

_Hab._—Rio.
Allied to _E. Doris_, but size and shape of _E. Junia._

**Subfam. Elymninae.**

**Genus Dyctis, Boisduval.**

*Dyctis astrifera,* n. sp.

♀ Wings above rich pitchy-brown; external area smoky-brown; primaries with a diffused, curved, discal, castaneous streak, from costa to inner margin; secondaries with discal area ochraceous-brown; a white spot on second median interspace; body blackish: wings below rich red-brown; external area blackish; primaries with basi-costal area blackish; external angle paler than the ground colour; an oblique discal series of five conspicuous white dots from below subcostal nervure to below second median branch; secondaries with discal area paler; six conspicuous white discal spots, forming a semicircle from first subcostal branch to interno-median interspace; external area speckled with white dots and liturae; body dark brown; proboscis ochreous: expanse of wings 2 inches, 10 lines.

_Hab._—Batchian.
Not nearly allied to any known species: form of _D. Valeria._

**Subfam. Brassolinae.**

**Genus Opsiphanes, Westwood.**

*Opsiphanes luteipennis,* n. sp.

Allied to _O. Batea_, altogether paler on both surfaces; dark external area above only occupying one-third of the wings, edged internally with fulvous, and deeply sinuate; a row of large submarginal white spots on secondaries, but only three on primaries; wings below with the discoidal markings in primaries less irregular; brown discal band narrower; ocellus smaller; secondaries less hatched with
Mr. A. G. Butler's descriptions of some new species

brown; whitish bands better defined; marginal brownish border narrower: expanse 3 inches, 4 lines.

_Hab._ — ?

**Subfam. Nymphalinae.**

**Genus Panopea, Hübnner.**

*Panopea Drucei*, n. sp. (Pl. VI. fig. 3.)

Primaries above black; a subcostal spot at end of basal third of cell, an oblique quadrifid band cut by the median nervure and its two first branches, an oblique subapical band, composed of a subcostal dot and three large spots, a waved submarginal series of seven spots (smallest at the centre of the series), and some geminate dots near centre of outer margin, pearly-white; fringe white-spotted; secondaries whitish-buff, becoming white at basi-costal area; base, costa, and a broad marginal border, black-brown, changing to pale brown towards anal angle; nervures and internervular folds black; a submarginal series of six large white spots; a double, interrupted, marginal rosy-white line; fringe white-varied: body black-brown, head and prothorax black, white-spotted; primaries below with apical costal half olivaceous-brown; all the white markings more conspicuous than above; a white costal spot at base; secondaries with the dark-brown area replaced by pale olive-brown; two continuous marginal white lines; base dark brown, white-spotted; thorax black, white-spotted; abdomen brown, venter whitish; expanse 3 inches, 3 lines.

_Hab._—Madagascar.

A very handsome species.

**Genus Hestina, Westwood.**

*Hestina mimetica*, n. sp.

Allied to *H. Nama*; differs in its much smaller size; browner tint; the divergence, towards costa of primaries, of the double discal, from the double submarginal series of spots; the broader division between the discal spots on median interspaces; the regularly-formed angulated submarginal lunules on all the wings; the lilacine tint of internal area of primaries; the uniform red-brown tint of the ground colour on under surface; the black proboscis: expanse 3 inches, 3 lines.

_Hab._—Java.
An excellent mimic of *Danais agleoides* of Felder, from Java.

**Genus Neptis, Fabricius.**

*Neptis fervescens*, n. sp.

Wings above black-brown; primaries with a broad expanding streak along median nervure from base to middle of third median branch; two large subapical spots (touching externally), a large spot near external angle, and another on inner margin, fulvous; a bisinuate discal line, a narrower submarginal line, greyish-brown; secondaries with costa pale brown; a broad central transverse fulvous band becoming white on internal area; a pale brown diffused discal line just beyond, followed by a slightly undulated, disco-submarginal, dark-fulvous line; a submarginal pale-brown line; body black-brown: wings below altogether paler; all the fulvous bands and spots replaced by testaceous, varied with pearly whitish; primaries with a testaceous, irregular, subcostal streak from base to beyond middle of wing; inner margin greyish; submarginal lines rosy testaceous, distinct; secondaries with base and a sub-basal band testaceous; discal and submarginal lines of upper surface well defined; thorax and palpi dirty white; abdomen pale brown: expanse 1 inch, 10 lines.

*Hab.*—Philippines.

Allied to *N. heliodora*.

**Subfam. Acrinæ.**

**Genus Planema,** Doubleday.

1. *Planema arctifascia*, n. sp.

♂ Closely allied to *P. protea*, but differing (in a series of examples) in having the pale-testaceous band of secondaries of only half the usual width, and narrowing from costal to abdominal margin; nervures and base also darker: expanse 2 inches, 5 lines.

*Hab.*—Angola (J. J. Monteiro).

*P. Monteironis*, Butler, proves, from an examination of Mr. Druce’s specimens, to be a good and well-defined species; he has a series of both sexes received from Mr.
Mr. A. G. Butler's descriptions of some new species

Monteiro; the male is very similar to the female, but smaller.

2. *Planema pseudoprotea*, n. sp.

♂ Primaries above dark brown; discoidal area and base reddish; interno-discal area dull fulvous, cut by the internal nervure and first median branch; a subapical pale-testaceous band of the form of that in *P. protea*; secondaries with base brown, spotted with dusky; outer margin broadly brown; nervures of external half blackish; central area testaceous internally, fulvous externally: body, head and thorax black, spotted with white and testaceous; abdomen with basal segments blackish, edged with testaceous and spotted with fulvous; anal segments fulvous, with dorsal dusky patch; wings below with all the dark-brown (excepting a band within the subapical pale band of primaries), replaced by brownish-testaceous; nervures dusky; subapical band of primaries whitish; base of secondaries spotted with black; thorax black, white-spotted; palpi and legs fulvous; abdomen fulvous: expanse 2 inches, 2 lines.

♀ Similar to the male, but larger, the base darker; band pale reddish-tawny; interno-discal area bright reddish-tawny; secondaries with central area rather paler; wings below as in the ♂: expanse 2 inches, 6 lines.

*Hab.*—Angola (J. J. Monteiro).


♂ Primaries above dark brown; interno-discal area tawny, broader than in preceding species; a broad subapical white band and a hastate white spot or dash on first median interspace; secondaries tawny, base and apical margin brown, diffused; base spotted with dusky; nervures of outer half blackish; body black; head and thorax white-spotted; abdomen spotted with buff; segments edged with whitish scales: wings below paler than above; all the dark brown (excepting a band within the subapical white band, and the discoidal cell, of primaries), brownish-testaceous, nervures dusky; base of secondaries spotted with black; basal three-fourths of palpi and front pair of legs testaceous; thorax black, white-spotted; abdomen fulvous: expanse 2 inches, 7 lines.

*Hab.*—Angola (J. J. Monteiro).
and a new genus of Diurnal Lepidoptera. 429

♀ Var. band of primaries broader; a tawny hastate spot on first median interspace; interno-discal area broader and darker; secondaries with broad, brown outer margin as in preceding species; central area pale internally; its outer three-fourths dark tawny; primaries below with discoidal cell dark brown: expanse 2 inches, 8 lines.

_Hab._—Angola (J. J. Monteiro).

Fam. ERYCINIDÆ.

Subfam. NEMEOBIINÆ.

Genus _Mesosemia_, Hübner.

1. _Mesosemia atrocalis_, n. sp.

♀ Wings above with basal three-fifths greyish-brown; a curved, continuous, tolerably broad, white band, tapering at anal angle of secondaries; external area black-brown; primaries with an irregular, broad, central, dark-brown band, edged externally with testaceous and blackish, and containing two conspicuous ocelloid black spots, one at end of cell, tripupillate, with narrow testaceous iris, the other just below origin of first median nervule minutely unipupillate, with pale-brown iris; secondaries with broad irregular band as in primaries, containing one central, small, unipupillate ocellus: body greyish-brown: wings below irrorated with white; two large conspicuous ocelli in central band of secondaries: body pale greyish-brown: expanse 1 inch, 9 lines.

_Hab._—Pebas (Hauxwell), Ecuador.

Allied to _M. Sifia_ of Boisduval.

2. _Mesosemia trilineata_, n. sp.

♀ Allied to _M. Thymetina_, white band of primaries more oblique and widening from costa to internal margin, edged externally towards external angle with lilacine grey; secondaries with white band slightly broader, more arched, and beyond it a distinct lilacine grey streak: expanse 1 inch, 9 lines.

_Hab._—Amazons.

Allied to _M. Thymetina_ and _M. Maena_.

♀ 2

♂ Allied to *M. Machaera*, white transverse band of primaries widening from costa to external angle, edged internally with grey; ocellus trippupillated with silver; secondaries with very broad discal white band, tapering to anal angle; outer brown margin narrow, irregular, not reaching apex: expanse 1 inch, 6 lines.

*Hab.*—Sarayaco, Ecuador.

In some respects allied to *M. Isshia*.


♂ ? Wings above with basal two-fifths brown; discal area crossed by a very broad snow-white band, tapering towards costa of primaries and towards anal angle of secondaries, but not touching either; widest opposite cell of secondaries; external area dark brown; primaries with a large black trippupillated ocellus on apical half of discoidal cell, iris pale brown; a black transverse line across middle and end of cell, bounding ocellus; white band greyish internally; secondaries with white band intersected on its inner edge by three undulated black lines: body brown: wings below with basal area irrorated with whitish; primaries with a series of concentric dark-brown semicircles below ocellus; secondaries with nearly central greyish band, bounded on each side by three irregular dark-brown lines, with paler interspaces, and containing a central, blind, black, white-zoned ocellus; white band containing two nearly central brown spots, and interrupted on internal area by a small brown dot and short streak: body brown: expanse 1 inch, 10 lines.

*Hab.*—Ucayali, Peruvian Amazons (Bartlett).

Allied to *M. Thymetus*.

5. *Mesosemia Hesperina*, n. sp.

♂ Allied to *M. Veneris*, but the black bands of primaries much more angular, incurved towards costa; the band in continuation of the ocellus obsolete; the bands on basal half of secondaries obsolescent; the discal black bar narrower, nearer to margin; the submarginal band reduced to a line and placed close to margin; wings below pale grey-brown, with dark smoky-brown transverse bands; the submarginal line maculate; primaries with a conspicuous uni-
pupillate ocellus at end of cell; secondaries with a small blind ocellus, both with pale stramineous iris: expanse 1 inch, 5 lines.

_Hab._—Chontales (Belt).

**Subfam. Eurygoninae.**

**Genus Eurygona, Boisduval.**

_Eurygona fervida, n. sp._

Wings above dark smoky-brown; primaries with a broad oblique tawny patch, dusky at base from base and basal half of inner margin to middle of third median branch; secondaries with costa pale white-brown; internobasal two-thirds of wing reddish; the veins, and a cuneiform patch from apex of third median to middle of second median branch, tawny; thorax smoky-brown, abdomen inclining to tawny; wings below shining whitey-brown, crossed by four continuous distinct reddish-brown lines or streaks; the second at end of basal third, recurving as it reaches the first median branch of secondaries, and thus running to inner margin; the third nebulous, diffused towards the costal margins; the fourth becoming maculate on secondaries, not continued beyond the third median branch; outer margin reddish-brown, becoming golden orange, and denticulate on anal margin of secondaries; secondaries with four black submarginal spots along anal half of outer margin, edged externally with white: body whitey-brown: expanse 1 inch, 7 lines.

_Hab._—Maracaibo (Coll. Kaden).

Somewhat like _E. Utica_ above, more like _E. Mys_ below.

**Subfam. Erycininae.**

**Genus Panara, Westwood.**

1. _Panara aureizona, n. sp._

♀ Wings above jet black; primaries crossed obliquely from costa to external margin by a broad orange band, widest upon costa, suddenly narrower from subcostal nervure, not quite reaching external angle: body black-brown; margins of venter orange: wings below as above: expanse 1 inch, 7 lines.

_Hab._—Minas Geraes.

Similar to, but much larger than, _Mesene sagaris♀._
2. *Panara arctifascia*, n. sp.

♀ Wings above jet black; primaries crossed obliquely from costa almost to outer margin near external angle by a narrow, parallel, pale-orange band, slightly convex externally; wings below as above: body black brown; margins of venter orange: expanse 1 inch, 7 lines.

*Hab.*—Espirito Santo.

Closely allied to *P. phereclus*, but the band of primaries rather narrower, and the fringe not varied with white above or below.

**Genus Rusalkia, Kirby.**

*Rusalkia Charon*, n. sp.

Wings above jet black; nervures greyish; primaries with an oblique orange streak tapering from close to costa to internervular fold of first median interspace near external angle: body black: wings below slightly less black than above, nervures distinctly grey; secondaries with a crimson subcostal spot close to base; a nebulous grey streak close to outer margin; thorax brown, venter black, with a scarlet line on each side: expanse 1 inch, 9 lines.

*Hab.*—Rio.

Allied to *R. Marathon*, but at once distinguished from it and *R. Ctesiphon*, by the shorter oblique band of primaries, the smaller red spot near base of secondaries on under surface, and the nebulous submarginal grey streak.

**Fam. PAPILIONIDÆ.**

**Subfam. Pierinæ.**

**Genus Ixias, Hübner.**

*Ixias familiaris*, n. sp.

♀ Nearly allied to *I. evippe*, primaries above without the white patch on internal margin; oblique postmedian band narrower, interrupted in the centre, enclosing a nebulous black spot on second, as well as on first, median interspace; white basal area of secondaries restricted, the base and internal area clouded with grey excepting on basal half of abdominal fold: body greenish-grey: wings below pale ochreous, sulphur yellow at base, hatched with brown; an angular series of five indistinct dusky lunules.
and a new genus of Diurnal Lepidoptera.

beyond cell on disc; a large black spot at end of cell; a streak ending in a black spot on first median interspace, and the interno-discal area smoky-brown; secondaries with a black spot at end of cell; a dusky subcostal spot and several others on disc beyond cell: body sulphur yellow: expanse 2 inches, 11 lines.

_Hab._—Thibet.

**Genus Belenois, Hübner.**

*Belenois solilucis, n. sp.*

♂ Above very like _B. Ianthe_, but the dark-brown border more regular and of only about half the width, below slightly paler yellow than above; margin black spotted on veins; costal edge of primaries black; base broadly orange-tinted; secondaries with basi-costal area orange: body pale yellow: expanse 2 inches, 8 lines.

_Hab._—Angola.

At once distinguished from _B. Ianthe_ by the simple character of the under surface.

**Subfam. Papilioninæ.**

**Genus Papilio, Linnaeus.**

1. *Papilio incandescens, n. sp._ (Pl. VI. fig. 1.)

♂ Wings above black; fringe white-spotted; primaries with a postmedian oval green patch (cut by the first and second median branches), upon which externally, at its upper extremity, is an oblique pale yellow spot; secondaries crossed by an interrupted scarlet band, changing in some lights to bright pearly lilacine, composed of a broad quadrifid patch cut by the median nervules, and two unequal circular spots, between nervures beyond; abdominal margin clothed with long white hairs; body above black; wings below altogether paler, especially the apical area of primaries; an irregular, partly ill-defined, pale yellow, oblique band crossing the cell at origin of third median branch; secondaries with a curved discal band of six rosy spots, smallest towards costa: body dark brown; thorax spotted with scarlet: expanse 3 inches, 2 lines.

_Hab._—Pará (Beske).

Allied to _P. Lycimenes_; primaries more like _P. Nephalion._
2. *Papilio Drucei*, n. sp. (Pl. VI. fig. 2.)

Wings above black, paler towards apex of primaries; fringe white-varied; primaries with a broad dull green discal band from just beyond second median branch to inner margin; secondaries with a large quadrifid sub-triangular scarlet patch, cut by the median nervures, in certain lights changing to brilliant pearly lilacine, and surrounded by a vivid blue halo; abdominal fold bearing a long streak of brown hairs; body black, collar spotted with crimson at the sides: wings below paler than above; primaries greyish, excepting interno-basal area, which is blue-black; band of upper surface wanting; secondaries rich brown; disc crossed by six rosy spots, the first a mere dot, the second, third and fourth largest, paler internally, the fifth semicircular, placed obliquely to the others, the sixth small, at anal angle: body black; thorax spotted with scarlet; antepenultimate segment of abdomen with a scarlet fringe: expanse 4 inches.

*Hab.—Ecuador.*

Most nearly allied to *P. Vertumnus*, noticeably different, from the band of primaries being considerably nearer to outer margin and much longer.

3. *Papilio Metaphaon*, n. sp.

Allied to *P. Phaon*; primaries almost identical; secondaries with a large greenish-grey patch from basal third of cell to centre of disc, arched and dentate, sinuate externally; costa brown; a large suboval spot at apex, six submarginal dots, and the fringes creamy whitish; inner margin and base brown; body brown; head black, streaked with grey; pterygodes black, spotted with greenish-grey; wings below shining brown; primaries with four distinct diffused whitish spots near outer margin from first median interspace to external angle; secondaries with an oval white spot at apex; six submarginal dots and the fringes white, five increasing, irregular, lake-red spots or strioles from second subcostal interspace to anal angle; two large basal scarlet spots, one on the costal lobe, the other on interno-median interspace: body brown; thorax and anal segments spotted with scarlet: expanse 3 inches, 10 lines.

*Hab.—Mexico (Coll. Kaden).*

Somewhat like *P. Ulopos* of Gray, but quite distinct.
4. Papilio polystictus, n. sp.

♂, ♀ P. Protodamas, var. b, G. R. Gray.

Wings above dark brown, primaries slightly and secondaries vividly shot with glittering sap-green; primaries with a straight discal series of increasing, small, diffused, greenish-grey, lunate spots, larger and more distinct in the female; secondaries with a slightly arched discal series of nearly equal oval greenish-grey spots, scarcely visible in the male, but well defined in the female; a disco-submarginal series of greenish-grey angulated streaks; fringes white; body above dark brown, dorsal region of the abdomen in male pale yellow; collar spotted with dirty ochraceous; primaries below with basal half black-brown, apical half and outer margin pale brown; four conspicuous, submarginal, pale-yellowish spots near external angle; secondaries shining brown, darker on disc; seven submarginal waved red streaks, surrounded with blackish, and shot with lilacine; body dark brown; thorax and anal segment spotted with golden yellow; venter spotted with white; expanse ő 4 inches, 1 line; ♀ 4 inches.

Hab.—S. Brazil (Coll. Druce); Rio Grande and Espirito Santo. B. M.

This species is clearly distinct from P. Protodamas.

Fam. HESPERIDÆ.

Genus CARYSTUS, Hübner.

Carystus placens, n. sp.

♂ Primaries above blackish-brown, the base streaked with tawny; seven hyaline spots placed exactly as in C. Antoninus; secondaries tawny, the costa and outer margin dark brown; thorax densely covered with greenish-grey scales, abdomen tawny; wings below rich dark brown, the basal half of costal area of primaries and the basal two-fifths of secondaries cream-coloured; primaries with a large grey bifid spot and a minute costal striole at apex; hyaline spots as above; secondaries with interno-median area yellow, gradually deepening in colour from base to anal angle, where it becomes red-brown; palpi and thorax cream colour, venter tawny; expanse 2 inches, 2 lines.

Hab.—Bogota.

Allied to C. Antoninus and C. phœnice.
Ancistroides, n. gen.

Allied to Astictopterus, but differing in the much longer and more slender antennae; also allied to Carystus (Sect. Hesperia of Swainson), but differing in the form of the wings and the absence of any trace of discocellular veinlets in secondaries. Type A. longicornis.

Ancistroides longicornis, n. sp.

Wings above rich brown; secondaries with a large quadrate ochreous patch at anal angle, and occupying more than a third of the wing: body dark brown: wings below paler than above; the patch in secondaries pale buff, extended laterally, and sinuated internally; thorax dark brown, palpi and collar varied with creamy and ochraceous scales; venter of abdomen pale buff: expanse 2 inches 4 lines.

Hab.—Timor (Wallace).

At first sight this species reminds one of Tagiades Pralaya of Moore.

Genus Antigonus, Hübner.

Antigonus decens, n. sp.

Wings above pale dove-colour, primaries and base of secondaries with a cinereous tint; primaries with costa and apical area brown; a large irregular dark-brown spot (enclosing externally a small hyaline white spot), crossing centre of discoidal cell; an angulated black discal line from costa to internal nervure near external angle; a subcostal hyaline white spot near apex; an indication of a submarginal series of dark brown spots; secondaries crossed near base by an oblique dusky line; a short subcostal line uniting costal and subcostal nervures, and a straight transverse discal line uniting subcostal and internal nervures, black; an indication of a submarginal series of cinereous spots: body above brown, abdomen greyish: wings below much paler than above, secondaries whitish; markings nearly as above, but less strongly defined: body white: expanse 1 inch, 7 lines.

Hab.—Peruvian Amazons (Bartlett).

Not allied to any known species.
https://doi.org/10.1111/j.1365-2311.1874.tb00172.x.

View This Item Online: [https://www.biodiversitylibrary.org/item/51650](https://www.biodiversitylibrary.org/item/51650)  
DOI: [https://doi.org/10.1111/j.1365-2311.1874.tb00172.x](https://doi.org/10.1111/j.1365-2311.1874.tb00172.x)  
Permalink: [https://www.biodiversitylibrary.org/partpdf/27169](https://www.biodiversitylibrary.org/partpdf/27169)

**Holding Institution**  
Smithsonian Libraries and Archives

**Sponsored by**  
Smithsonian

**Copyright & Reuse**  
Copyright Status: NOT_IN_COPYRIGHT

This document was created from content at the Biodiversity Heritage Library, the world’s largest open access digital library for biodiversity literature and archives. Visit BHL at [https://www.biodiversitylibrary.org](https://www.biodiversitylibrary.org).