

trary the tubercles are much larger than those of *D. repanda*, and it wants the row of opaque spots down the sides of the cloak which distinguish that species. The branchial plumes are also more numerous and the tentacula differently formed.

XLIII.—On the species of Chalcidites inhabiting the Arctic Region.

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HAVING in a previous communication mentioned the *Chalcidites* of the North American region, I will now proceed to notice the species discovered within the Arctic Circle. Several of them also inhabit England, and among these, as may be supposed, are the *Chalcidites*, which with us live through the winter or appear early in the spring.

EURYTOMA.

*E. verticillata*, *Fabr.* ? = *E. appendigaster* *Swederus*, *Zetterstedt*.

ISOSOMA.

*I. longulum*, *Ent. Mag.* i. 14 = *Eurytoma guttula*, *Zett.*

*I?* (*Eurytoma*, *Zett.*) *minuta*, *Zett.*

CALLIMOME.

*C. Bedeguaris*, *Linn.* ?

*C. viridissimus*, *Zett.* = *C. affinis*, *Ent. Mag.* i. 133.

*C. Tipulariarum*, *Zett.*

*Zetterstedt* describes some other species as varieties of *C. viridissimus*, but remarks that they are probably distinct species.

*C. chloromerus*, *Ent. Mag.* i. 128. In the summer at Alten, Finmark.

*C. minutus*, *Ent. Mag.* i. 137. Alten.

*C. posticus*, *Ent. Mag.* i. 137. Hammerfest, Finmark.

*Ormyrus punctiger*, *Ent. Mag.* i. 140. Alten.

EUNEURA.

Genus novum *Corynæ* affinis. *Fem.* Corpus convexum, robustum, subcylindricum : antennæ 13-articulatæ, subclavatæ, thorace non longiores : parapsides scuto fere in unum confusæ : petiolus brevissimus : abdominis segmentum 2<sup>um</sup> 1<sup>o</sup> plus duplo brevius ; 3<sup>um</sup> 2<sup>o</sup> duplo longius ; 4<sup>um</sup> 3<sup>o</sup> paullo longius ; 5<sup>um</sup> 4<sup>o</sup> paullo longius ; 6<sup>um</sup> et 7<sup>u</sup> brevissima : ulna brevis, crassa, humeri triente non longior ; radius ulna duplo longior ; cubitus ulna longior.

*Euneura Augarus*, *fem.* *Viridis, antennis nigris, pedibus fulvis, femoribus viridibus, mesotarsis et metatarsis flavis, alis limpidis.*  
(Corp. long. lin.  $1\frac{1}{4}$  ; alar. lin. 2.)

Body convex, robust, dark green : head and thorax finely squameous : head a little broader than the thorax : eyes oval, prominent, of moderate size : ocelli near together on the vertex ; the middle one



a little in advance : antennæ black, subclavate, not longer than the thorax ; first joint long, slender, fulvous, black at the tip ; second cyathiform ; third and fourth very minute ; fifth and following joints to the tenth successively yet slightly shorter and broader ; club fusiform, more than twice the length of the tenth joint : thorax elliptical, broader before than behind : prothorax transverse, very short, narrow in front : scutum of the mesothorax broad ; sutures of the parapsides very indistinct, so that the latter seem almost to form one segment with the scutum ; axillæ large, triangular, not conniving ; scutellum rhomboidal, prominent, much more convex than the scutum, having a very indistinct transverse suture near its hind border : metathorax transverse, very short : propodeon large, obconic, declining : podeon stout, very short : abdomen elliptical, shining, very minutely squameous, almost smooth, narrow, but hardly longer than the thorax ; metapodeon short, conical, decumbent in front, shorter than one-fourth of the length of the abdomen ; octoon much less than half the length of the metapodeon ; ennaton at least twice the length of the octoon ; decaton a little longer than the ennaton ; protelum a little longer than the decaton ; paratelum and telum very short : oviduct concealed : legs fulvous ; coxæ and thighs green ; middle and hind tarsi yellow, their tips fuscous : wings of moderate size, very slightly tinged with fuscous ; nervures piceous ; humerus much less than half the length of the wing ; ulna short, thick, not more than one-third of the length of the humerus ; radius twice the length of the ulna ; cubitus longer than the ulna ; stigma small, emitting a very distinct branch.

Alten.

Zetterstedt in his ' *Insecta Lapponica* ' describes the following twenty-one species of *Chalcidites* as belonging to *Pteromalus* ; many of them, as it will be observed, have been separated from that genus.

1. quadrum, *Fabr.* (*Cheiopachys*) ; 2. hirtipes (*Trigonoderus* ?) ; 3. tarsatus ; 4. curtus ; 5. puparum, *Linn.* ; 6. violaceus ; 7. petiolatus (*Asaphes vulgaris* ?) ; 8. parvulus (*Pteromalus Pyttalus* ?) ; 9. gracilicornis ; 10. crassicornis ; 11. subvirescens (*Pteromalus Rhinthon* ?) ; 12. albipennis (*Iera* ?) ; 13. mandibularis ; 14. socius ; 15. tibiellus ; 16. palpigerus (*Pachylarthrus patellanus*) ; 17. rotundiventris (*Pteromalus domesticus* ?) ; 18. apicalis ; 19. brevicornis ; 20. pubicornis (*Cyrtogaster vulgaris* ?) ; 21. petioliventris.

*Cyrtogaster vulgaris*, *Ent. Mag.* i. 382. Alten.

—— *rufipes*, *Ent. Mag.* i. 383. Alten.

*Lamprotatus maculatus*, *Ent. Mag.* i. 459. Alten.

*Lamprotatus Phlegias*, mas. *Viridis, antennis piceis, pedibus fuscis, tarsis fulvis, alis limpidis.* (Corp. long. lin.  $1\frac{1}{4}$  ; alar. lin. 2.)

Body narrow, green : head and thorax convex, finely squameous : head a little broader than the thorax : antennæ filiform, piceous, a little longer than the thorax ; first joint long, slender, green ; second



cyathiform ; third and fourth very minute ; fifth and following joints to the tenth long, linear, successively decreasing in length ; club fusiform, more than twice the length of the tenth joint : thorax fusiform : prothorax transverse, narrower and rounded in front ; its breadth much more than twice its length : scutum of the mesothorax very long ; sutures of the parapsides distinct ; axillæ large, triangular, approaching near to each other ; scutellum rhomboidal, having a transverse suture near its hind border : metathorax transverse, very short : propodeon large, obconic, slightly decumbent : podeon very short : abdomen nearly linear, flat, smooth, shining, narrower and a little shorter than the thorax ; metapodeon large ; octoon, ennaton, decaton and protelum of moderate size ; paratelum and telum very short : legs fuscous ; coxæ green ; knees and tarsi fulvous, the latter darker towards their tips : wings limpid ; nervures fuscous ; humerus much less than half the length of the wing ; ulna not more than half the length of the humerus ; radius very much longer than the ulna ; cubitus much shorter than the ulna ; stigma of moderate size, emitting a short branch.

Alten.

Lamprotatus Mazæus, fem. *Æneus, antennis piceis, pedibus fulvis, alis limpidis.* (Corp. long. lin.  $1\frac{1}{4}$  ; alar. lin.  $2\frac{1}{2}$ .)

Body convex, æneous : head and thorax finely squameous ; head a little broader than the thorax : antennæ slender, subclavate, piceous, a little longer than the thorax ; first and second joints green ; first long, slender ; second cyathiform ; third and fourth very minute ; fifth and following joints long, linear, successively decreasing in length and very slightly increasing in breadth ; club fusiform, twice the length of the tenth joint : thorax elliptical : prothorax transverse, narrower in front ; its breadth much more than twice its length : scutum of the mesothorax broad ; sutures of the parapsides distinct, approaching each other ; axillæ large, triangular ; scutellum rhomboidal, having a transverse suture near its hind border ? : metathorax transverse, very short : propodeon large, obconic, decumbent : podeon short, stout : abdomen oval, much shorter than the thorax ; metapodeon occupying nearly one-third of the dorsum ; octoon about half the length of the metapodeon ; ennaton much longer than the octoon ; decaton much shorter than the ennaton ; protelum as long as the decaton ; paratelum and telum very short : legs fulvous ; coxæ green : wings limpid, ample ; nervures fuscous ; humerus much shorter than half the length of the wing ; ulna hardly more than half the length of the humerus ; radius very much longer than the ulna ; cubitus much shorter than the ulna ; stigma of moderate size, emitting a short branch.

Alten.

Lamprotatus Brises, fem. *Æneo-viridis, abdomine cyaneo, antennis nigris, pedibus flavis, femoribus basi viridibus, alis limpidis.* (Corp. long. lin.  $\frac{5}{4}$ —1 ; alar. lin.  $1\frac{1}{4}$ — $1\frac{1}{2}$ .)

Body convex : head and thorax æneous-green, finely squameous :



head a little broader than the thorax : antennæ black, subclavate, as long as the thorax ; first joint long, slender, green ; second cyathiform ; third and fourth very minute ; 5th and following joints to the tenth successively shorter and broader ; club fusiform, broader than the tenth joint and more than twice its length : thorax fusiform : prothorax transverse, rounded in front ; its breadth more than twice its length : scutum of the mesothorax rather long ; sutures of the parapsides very distinct ; axillæ large, triangular, approaching near to each other ; scutellum rhomboidal, having a transverse suture near its hind border : metathorax transverse, very short : propodeon large, obconic, slightly declining : pondeon stout, short, not more than half the length of the propodeon : abdomen oval, blue, smooth, shining, keeled beneath, and thence forming an abrupt angle to the tip, hardly more than half the length of the thorax ; metapodeon occupying about one-third of the dorsum, slightly concave towards the base ; octoon not half the length of the metapodeon ; ennaton shorter than the octoon ; decaton still shorter ; protelum as long as the decaton ; paratelum and telum very short : legs yellow ; coxæ green ; thighs green towards the base ; tips of the tarsi fuscous : wings limpid ; nervures fuscous ; humerus much less than half the length of the wing ; ulna more than half the length of the humerus ; radius much longer than the ulna ; cubitus much shorter than the ulna ; of moderate size, emitting a short branch.

Alten.

Lamprotatus Cleta, mas. *Viridis, abdomine æneo, antennis fuscis, pedibus flavis, mesopedum tarsis fuscis, alis albis.* (Corp. long. lin.  $\frac{3}{4}$  ; alar. lin.  $1\frac{1}{4}$ .)

*Male*.—Body convex, rather slender ; head and thorax green, finely squameous : head a little broader than the thorax, slightly impressed in front : antennæ fuscous, slender, filiform, a little longer than the thorax ; first and second joints green ; first long, stout ; second cyathiform, piceous ; third and following joints to the tenth long, linear, successively decreasing in length ; club fusiform, pointed, twice the length of the tenth joint : thorax elliptical : prothorax transverse, rounded in front, much narrower than the mesothorax ; its length somewhat less than half its breadth : scutum of the mesothorax rather long ; parapsides prominent, their sutures very distinct ; axillæ large, triangular, approaching near to each other ; scutellum somewhat rhomboidal, very convex : metathorax transverse, very short : propodeon rather large, declining, obconical : pondeon stout, very short : abdomen smooth, shining, æneous, flat, nearly linear, tinged with purple, a little shorter and narrower than the thorax ; metapodeon occupying less than one-third of the dorsum ; octoon, ennaton, decaton and protelum of moderate and nearly equal size ; paratelum and telum short : sexual parts long, piceous : legs bright yellow ; coxæ green ; hind thighs piceous towards the base ; tarsi and tips of the tibiæ of the middle legs fuscous : wings white, rather short ; nervures fulvous ; humerus much less than half the length of the wing ; ulna more than half the length of the humerus ; radius much longer than



the ulna ; cubitus more than half the length of the ulna ; stigma of moderate size, emitting no branch.

*Female ?*—Antennæ piceous, subclavate, not longer than the thorax ; first and second joints green ; fifth and following joints to the tenth successively shorter and broader ; club elliptical, broader than the tenth joint, and more than twice its length : abdomen oval, deeply keeled beneath, much shorter than the thorax ; metapodeon occupying less than one-fourth of the dorsum ; octoon shorter than the metapodeon ; ennaton shorter than the octoon ; decaton still shorter ; protelum as long as the decaton ; paratelum and telum short : legs dark yellow ; thighs mostly green ; tips of the tarsi fuscous.

Alten.

Lamprotatus Scæa, mas. *Viridis, abdomine æneo-vario, antennis nigris, pedibus flavis fusco-cinctis, alis limpidis.* (Corp. long. lin. 1 ; alar. lin.  $1\frac{3}{4}$ .)

Head and thorax convex, finely squameous : head dark bluish green, broader than the thorax : antennæ black, slender, filiform, a little longer than the thorax ; first joint long, slender ; second cyathiform ; third and fourth very short ; fifth and following joints to the tenth long, linear, successively decreasing in length ; club fusiform, much more than twice the length of the tenth joint : thorax elliptical : prothorax transverse, rounded in front, narrower than the mesothorax ; its breadth much more than twice its length : scutum large ; parapsides prominent, their sutures very distinct ; axillæ large, triangular, approaching near to each other ; scutellum rhomboidal, having a transverse suture near its hinder border ; metathorax transverse, very short : propodeon obconic, decumbent : podeon stout, very short : abdomen nearly linear, flat, æneous-green, shining, smooth or covered with very minute scales, shorter and narrower than the thorax ; metapodeon occupying more than one-third of the dorsum ; octoon, ennaton, decaton and protelum of moderate and nearly equal size ; paratelum and telum short : sexual parts long, fuscous : legs yellow ; coxæ green ; thighs piceous, yellow towards their tips ; middle tarsi and tips of middle and hind tibiæ fuscous : wings limpid ; nervures fuscous ; humerus much less than half the length of the wing ; ulna more than half the length of the humerus ; radius much longer than the ulna ; cubitus more than half the length of the ulna ; stigma of moderate size, emitting a short branch.

Alten.

Lamprotatus Leucon, fem. *Cyaneo-viridis, antennis nigris, pedibus fulvis, femoribus basi fuscis aut viridibus, tarsis flavis, alis albis.* (Corp. long. lin.  $\frac{3}{4}$  ; alar. lin.  $1\frac{1}{4}$ .)

Body slender, bluish green : head and thorax convex, finely squameous : head a little broader than the thorax : antennæ black, clavate, slender, as long as the thorax ; first joint green, long, slender ; second cyathiform ; third and fourth very minute ; fifth and following joints to the tenth successively shorter and broader ; club elliptical, broader than the tenth joint, and more than twice its length : thorax fusiform : prothorax transverse, short, much narrower in front ; its



breadth much more than twice its length : scutum of the mesothorax rather long ; sutures of the parapsides distinct ; axillæ large, triangular ; scutellum rhomboidal, having a rim along its hind border : metathorax transverse, very short : propodeon large, obconic, slightly decumbent, having a rim on each side : pondeon stout, very short : abdomen elliptical, smooth, shining, concave above, keeled beneath, a little narrower and much shorter than the thorax ; segments retracted beneath and hiding the ventral segments ; metapodeon occupying much less than one-third of the dorsum ; octoon much shorter than the metapodeon ; ennaton much shorter than the octoon ; decaton and protelum of moderate size, each equal to the ennaton ; paratelum and telum short : legs fulvous ; coxæ green ; thighs fuscous towards the base ; tips of middle tibiæ slightly fuscous ; middle and hind tarsi yellow, their tips fuscous : wings white, narrow ; nervures pale fulvous ; humerus much shorter than half the length of the wing ; ulna not much more than half the length of the humerus ; radius very much longer than the ulna ; cubitus shorter than the ulna ; stigma very small, emitting a short branch.

*Var. β.* Thighs mostly green.

Alten.

Lamprotatus Lesches, mas. *Viridis, abdomine æneo, antennis piceis, pedibus flavis, alis limpidis.* Fem.? *Antennis nigris, abdomine cyaneo-viridi, pedibus fulvis, femoribus viridibus.* (Corp. long. lin. 1—1 $\frac{1}{4}$  ; alar. lin. 2—2 $\frac{1}{2}$ .)

*Male.*—Head and thorax green, convex, finely squameous : head a little broader than the thorax : antennæ piceous, filiform ; first joint long, stout, fulvous toward the base ; second cyathiform ; third and fourth very minute ; fifth and following long, linear : thorax elliptical : prothorax transverse, rounded in front, much narrower than the mesothorax ; its breadth not more than twice its length : scutum of the mesothorax broad ; parapsides prominent, their sutures very distinct ; axillæ large, triangular, approaching each other ; scutellum rhomboidal, having a transverse suture near the hind border : metathorax transverse, very short : propodeon large, obconic, slightly decumbent : pondeon short, stout : abdomen æneous, flat, nearly linear, smooth, shining, shorter and narrower than the thorax ; metapodeon concave, occupying about one-third of the dorsum ; octoon, ennaton, decaton and protelum of moderate size ; paratelum and telum very short : legs yellow ; coxæ green ; tips of tarsi fuscous : wings limpid, ample ; nervures fuscous ; humerus much less than half the length of the wing ; ulna not more than half the length of the humerus ; radius nearly twice the length of the ulna ; cubitus much shorter than the ulna ; stigma large, emitting a short branch.

*Female?*—Antennæ black, slender, subclavate, as long as the thorax ; first joint long, slender, green ; second cyathiform ; third and fourth very minute ; fifth and following joints long, linear, successively decreasing in length, and slightly increasing in breadth until the tenth ; club fusiform, twice the length of the tenth joint : abdomen oval, convex, bluish green, keeled beneath, much shorter



than the thorax ; metapodeon slightly concave, occupying more than one-third of the dorsum ; octoon not half the length of the metapodeon ; ennaton shorter than the octoon ; decaton still shorter ; protelum short ; paratelum and telum very short : legs fulvous ; thighs green, their tips fulvous ; tips of the tarsi fuscous.

Alten.

Lamprotatus Icelos, mas. *Viridis, abdomine æneo, antennis piceis, pedibus fulvis, femoribus viridibus, mesotibiis apice et mesotarsis fuscis, alis limpidis.* Fem.? *Antennis nigris, abdomine viridi, femoribus fulvis basi fuscis.* (Corp. long. lin. 1 ; alar. lin. 2.)

*Male*.—Head and thorax green, convex, finely squameous : head a little broader than the thorax : antennæ piceous, filiform, as long as the thorax ; first joint long, stout ; second cyathiform ; third and fourth very minute ; fifth and following joints long, linear, successively decreasing in length ; club fusiform, twice the length of the tenth joint : thorax elliptical : prothorax transverse, rounded in front, its breadth much more than twice its length : scutum of the mesothorax large ; sutures of the parapsides very distinct ; axillæ large, triangular, approaching each other ; scutellum rhomboidal, having a transverse suture near its hind border : metathorax transverse, very short : propodeon large, obconic, decumbent : podeon stout, short : abdomen æneous, oval, flat, smooth, shining, shorter than the thorax ; metapodeon large ; octoon, ennaton, decaton and protelum of moderate size ; paratelum and telum very short : legs fulvous ; coxæ and thighs green ; tips of the tarsi fuscous ; tarsi and tips of the tibiæ of the middle legs piceous : wings limpid ; nervures piceous ; humerus much less than half the length of the wing ; ulna rather more than half the length of the humerus ; radius much longer than the ulna ; cubitus much shorter than the ulna ; stigma large, emitting a short branch.

*Female*?—Antennæ black, clavate, as long as the thorax ; first joint long, slender, green ; second cyathiform ; third and fourth very minute ; fifth and following joints to the tenth successively shorter and broader ; club elliptical, broader than the tenth joint, and more than twice its length : abdomen oval, green, convex, keeled beneath, much shorter than the thorax ; metapodeon large ; octoon and following segments short : legs fulvous ; coxæ green ; thighs fuscous towards the base ; tarsi yellow, their tips fuscous.

Alten.

Seladerma Mazares, mas et fem. *Viride, cupreo varium, antennis nigris, pedibus fulvis, femoribus basi viridibus, alis limpidis.* (Corp. long. lin.  $1\frac{3}{4}$ —2 ; alar. lin.  $2\frac{3}{4}$ —3.)

*Male*.—Body slender : head and thorax convex, bright green, finely squameous : head large, broader than the thorax : antennæ black, stout, filiform, longer than the thorax ; first joint long, subclavate ; second cyathiform ; third and fourth very minute ; fifth and following joints to the tenth long, linear, successively decreasing in length : thorax fusiform : prothorax transverse, narrower in front ;



its breadth about twice its length : scutum of the mesothorax very long ; sutures of the parapsides very distinct, approaching each other ; axillæ large, triangular, not conniving ; scutellum rhomboidal, having a transverse suture near the tip, between which and the suture it is furrowed longitudinally : metathorax very short : propodeon large, obconic, slightly decumbent : pondeon stout, short : abdomen linear, flat, shining, very minutely squameous, shorter and narrower than the thorax ; metapodeon concave, occupying nearly one-third of the dorsum ; octoon very short ; ennaton a little longer than the octoon ; decaton still longer ; protelum longer than the decaton ; paratelum shorter than the protelum ; telum short : legs fulvous ; coxæ and hind thighs green ; fore and middle thighs green toward the base ; tips of the tarsi fuscous ; wings limpid ; nervures piceous ; humerus much shorter than half the length of the wing ; ulna less than half the length of the humerus ; radius nearly twice the length of the ulna ; cubitus much shorter than the ulna ; stigma of moderate size, emitting rather a long branch.

*Female*.—Head cupreous ; antennæ like those of the male ; club fusiform, twice the length of the tenth joint : abdomen green, varied with cupreous, fusiform, concave above from the base till towards the tip, keeled beneath, a little shorter and narrower than the thorax ; metapodeon occupying rather more than one-fourth of the dorsum ; octoon about half the length of the metapodeon ; ennaton as long as the octoon ; decaton as long as the ennaton ; protelum shorter than the decaton ; paratelum shorter than the protelum ; telum short.

Alten.

Seladerma Saurus, fem. *Cyaneum, antennis piceis, pedibus flavis, alis limpidis.* (Corp. long. lin.  $1\frac{1}{2}$  ; alar. lin.  $2\frac{1}{4}$ .)

Body blue : head and thorax convex, finely squameous : head a little broader than the thorax : antennæ piceous, subclavate, as long as the thorax ; first and second joints blue ; first joint long, slender ; second cyathiform ; third and fourth very minute ; fifth and following joints to the tenth successively shorter and broader ; club fusiform, twice the length of the tenth joint : thorax oval : prothorax transverse ; its breadth much more than twice its length : sutures of the parapsides very distinct, approaching each other ; axillæ large, triangular, not conniving ; scutellum rhomboidal : metathorax transverse, very short : propodeon obconic, declining : pondeon very short : abdomen fusiform, smooth, shining, concave above, slightly keeled beneath, narrower and very much longer than the thorax ; metapodeon large ; octoon and the following segments of moderate size : legs yellow ; coxæ blue ; tips of the tarsi fuscous ; wings limpid ; nervures fulvous ; humerus much less than half the length of the wing ; ulna hardly half the length of the humerus ; radius much longer than the ulna ; cubitus shorter than the ulna, emitting a short branch.

Alten.

Seladerma Lalage, Hammerfest.



*Gastrancistrus Panares*, fem. *Cyaneo-viridis*, *antennis nigris*, *oviductu exerto abdominis dimidio vix brevior*, *pedibus fulvis*, *femoribus viridibus*, *alis subfuscis*. (Corp. long. lin.  $\frac{2}{3}$ ; alar. lin.  $1\frac{1}{4}$ .)

Body bluish green: head and thorax convex, shining, very minutely squameous, almost smooth: head transverse, as broad as the thorax; front vertical: antennæ black, clavate, not longer than the thorax: thorax robust, elliptic: prothorax transverse, narrower in front, its breadth much more than twice its length: scutum of the mesothorax rather long; sutures distinct, approaching each other; scutellum rhomboidal: metathorax transverse, very short: propodeon obconic, decumbent: podeon very short: abdomen much compressed, smooth, a little longer than the thorax but not half its breadth: oviduct fulvous; sheaths fuscous, nearly half the length of the abdomen: legs dark fulvous; coxæ and thighs green: wings slightly fuscous; nervures piceous; humerus much less than half the length of the wing; ulna rather more than half the length of the humerus; radius a little longer than the ulna; cubitus more than half the length of the ulna; stigma of moderate size, emitting a short branch.

Alten.

*Eutelus inornatus* (*Ent. Mag.* ii. 363). Alten.

*Pteromalus Crocale* (*Monog. Chal.* i. 239). Alten.

*Pteromalus sylvicola* (*Ent. Mag.* ii. 481). Alten.

*Pteromalus Iera*, mas. *Cyaneo-viridis*, *abdomine cupreo*, *antennis piceis*, *pedibus flavis*, *femoribus fulvis*, *alis limpidis*. Fem. *Abdomine cyaneo-viridi*, *disco purpureo*, *antennis nigris*, *pedibus fulvis*, *femoribus viridibus*. (Corp. long. lin.  $1\frac{1}{2}$ — $1\frac{3}{4}$ ; alar. lin.  $2\frac{1}{4}$ — $2\frac{1}{2}$ .)

*Male*.—Body long and slender: head and thorax bluish green, convex, finely squameous: head a little broader than the thorax: antennæ piceous, filiform, slender; first joint yellow, long, slender, piceous towards the tip; second cyathiform; third and fourth very minute; fifth and following joints to the tenth long, linear, successively but slightly decreasing in length; club fusiform, more than twice the length of the tenth joint: thorax elliptical: prothorax very short: scutum of the mesothorax rather long; sutures of the parapsides very indistinct; axillæ large, triangular, not conniving; scutellum rhomboidal: metathorax very short: propodeon large, obconic, almost horizontal, having a rim on each side and a ridge along the middle: podeon very short: abdomen linear, smooth, shining, cupreous, a little narrower but not shorter than the thorax, having an indistinct yellow spot towards the base which is bright green; metapodeon occupying about one-fourth of the dorsum; octoon not half the length of the metapodeon; ennaton as long as the octoon; decaton a little longer than the ennaton; protelum as long as the decaton; paratelum longer than the protelum; telum short: legs bright yellow; coxæ green; thighs fulvous; tips of the tarsi fuscous: wings limpid; nervures fuscous; humerus much less than half the



length of the wing; ulna more than half the length of the humerus; radius nearly as long as the ulna; cubitus much shorter than the radius; stigma small, emitting a short branch.

*Female*.—Head as broad as the thorax: antennæ black, slender, clavate, shorter than the thorax; first joint long, slender; second cyathiform; third and fourth very minute; fifth and following joints to the tenth successively shorter and broader; club elliptical, broader than the tenth joint, and more than twice its length: abdomen fusiform, nearly as long as the thorax, bluish green, purple along the disc, concave above, keeled beneath; metapodeon occupying a little more than one-third of the dorsum; octoon and the following segments short, but successively increasing in length: legs fulvous; thighs green; tips of the tarsi piceous.

Alten and Hammerfest.

*Pteromalus Musæus*, fem. *Æneus*, *antennis basi fulvis, pedibus fulvis, femoribus viridibus, tibiis apice tarsisque flavis, alis limpidis*. (Corp. long. lin.  $1\frac{3}{4}$ ; alar. lin.  $2\frac{1}{2}$ .)

Body æneous, very robust: head and thorax convex, finely squameous: head transverse, as broad as the thorax: antennæ fulvous?; first joint long, slender; second cyathiform: thorax oval, very thick, broader before than behind: prothorax transverse, very short: scutum of the mesothorax broad; sutures of the parapsides very indistinct, approaching each other; axillæ large, triangular, not conjoining; scutellum rhomboidal: metathorax very short: propodeon transverse, decumbent: pondeon extremely short: abdomen elliptical, smooth, shining, attenuated at the tip, flat above, keeled beneath, much longer and narrower than the thorax; metapodeon of moderate size, less than one-fourth of the length of the abdomen; octoon much shorter than the metapodeon; ennaton, decaton and protelum each as long as the octoon; paratelum longer than the protelum; telum as long as the paratelum: legs fulvous; coxæ and thighs green; tarsi and tips of the tibiæ yellow: wings limpid; nervures fulvous; humerus much less than half the length of the wing; ulna little more than half the length of the humerus; radius longer than the ulna; cubitus much shorter than the ulna; stigma small, emitting a very short branch.

Alten.

*Pteromalus Pyttalus*, fem. *Æneus*, *antennis piceis, pedibus fulvis, femoribus viridibus, tarsis flavis, alis obsolete fuscis*. (Corp. long. lin.  $\frac{3}{4}$ —1; alar. lin.  $1\frac{1}{4}$ — $1\frac{1}{2}$ .)

Body æneous, short: head and thorax convex, finely squameous: head rather large, a little broader than the thorax: antennæ dark piceous, clavate, as long as the thorax; first joint long, slender; second cyathiform; third and fourth very minute; fifth and following joints to the tenth successively shorter and broader; club conical, more than twice the length of the tenth joint: thorax oval: prothorax transverse, very short: scutum of the mesothorax short, broad; sutures of the parapsides very indistinct; scutellum rhom-



hoidal: metathorax very short: propodeon transverse, short, decumbent: pondeon extremely short: abdomen a little longer than broad, smooth, shining, flat above, slightly keeled beneath, shorter and broader than the thorax; metapodeon occupying rather more than one-third of the dorsum; octoon not more than half the length of the metapodeon; ennaton shorter than the octoon; decaton still shorter; protelum as long as the decaton; paratelum and telum very short: legs fulvous; coxæ and thighs green; tarsi yellow, their tips fuscous: wings very slightly tinged with brown; nervures fulvous; humerus much less than half the length of the wing; ulna hardly more than half the length of the humerus; radius a little shorter than the ulna; cubitus very nearly as long as the radius; stigma very minute, emitting a short branch.

Alten.

*Pteromalus Rhinthon*, fem. *Cyaneus, antennis piceis, pedibus flavis, femoribus viridibus, tibiis fusco-cinctis, alis limpidis.* (Corp. long. lin.  $1\frac{1}{4}$ ; alar. lin. 2.)

Body dark blue: head and thorax convex, squameous: head hardly broader than the thorax: antennæ dark piceous, clavate, shorter than the thorax; first and second joints dark blue; first joint long, slender; second cyathiform; third and fourth very minute; fifth and following joints to the tenth successively but very slightly increasing in breadth and decreasing in length; club conical, twice the length of the tenth joint: thorax oval: prothorax very short, its length not equal to one-fourth of its breadth: scutum of the mesothorax broad; sutures of the parapsides very indistinct; axillæ large, triangular; scutellum rhomboidal, prominent: metathorax transverse, very short: propodeon obconic, decumbent: pondeon extremely short: abdomen elliptical, smooth, shining, attenuated towards the tip, concave above, slightly keeled beneath, a little narrower and longer than the thorax; metapodeon of moderate size; octoon short; ennaton and the following segments longer: legs fulvous; coxæ and thighs blue; tibiæ fuscous, their tips fulvous; wings limpid; nervures fulvous; humerus much less than half the length of the wing; ulna not half the length of the humerus; radius longer than the ulna; cubitus a little shorter than the ulna; stigma small, emitting a short branch.

Isle of Sorøe, Finmark.

*Pteromalus Mazaces*, mas. *Viridis, abdomine basi fulvo, antennis fuscis, pedibus flavis, alis subfulvis.* (Corp. long. lin. 1; alar. lin.  $1\frac{3}{4}$ .)

Body dark green: head and thorax convex, finely squameous: head a little broader than the thorax: antennæ fuscous, subclavate, as long as the thorax; first and second joints fulvous; first joint long, slender; second cyathiform; third and fourth very minute; fifth and following joints to the tenth successively shorter and broader; club conical, more than twice the length of the tenth joint: thorax oval:



prothorax very short: scutum of the mesothorax broad; sutures of the parapsides indistinct; axillæ large, triangular; scutellum rhomboidal: metathorax very short: propodeon short, decumbent: po-deon very short: abdomen circular, smooth, shining, concave, a little broader and much shorter than the thorax, having a fulvous spot towards the base; metapodeon large; octoon and the following segments short: legs yellow; coxæ green: wings having a slight fulvous tinge; nervures fulvous; humerus much less than half the length of the wing; ulna more than half the length of the humerus; radius not longer than the ulna; cubitus hardly more than half the length of the ulna; stigma small, emitting a very short branch.

Alten.

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XLIV.—*Observations on the Gasteropod Mollusca, designated by the name of Phlebenterata by M. de Quatrefages.* By M. SOULEYET\*.

M. DE QUATREFAGES has communicated to the Academy of Sciences a series of researches upon a group of *Gasteropod Mollusca*, whose organization differs widely, according to that naturalist, from that of the animals of the same type, and presents very singular peculiarities. M. de Quatrefages says, in fact, that he has observed in these *Mollusca* the partial or complete disappearance of the organs of circulation, whence would result a corresponding degradation in the respiratory organs; and he is moreover very much inclined to the opinion that the posterior aperture of the digestive tube disappears even in some of these *Gasteropods*, which would consequently bring them much nearer to animals of the most simple structure—the *Medusæ* for example.

The strangeness of these results, which appear to me contrary not only to all known facts on the organization of *Mollusca*, but also to all admitted and recognised principles in zoology, led me to extend the researches which I made some years ago on the anatomy and physiology of these animals, to those which form the subject of the memoirs published by M. de Quatrefages. Having already had occasion to observe some of these *Gasteropods* during the expedition round the world of the *Bonite*, I endeavoured to complete this investigation by that of species which are found on our coasts; but, as I cannot yet submit to the Academy the work which I have written on this subject, and which is retarded by the execution of the drawings accompanying it, I meantime request permission to state succinctly some of the results at which I have arrived, and which appear to me to contradict almost entirely those announced by M. de Quatrefages.

It is known that among the *Mollusca* in question there are first

\* From the *Comptes Rendus* for August 12th, 1844.





Walker, Francis. 1844. "On the species of Chalcidites inhabiting the Arctic Region." *The Annals and magazine of natural history; zoology, botany, and geology* 14, 331–342.

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