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Revision of *Henricus* BUSCK and Description of *Parirazona gen.n.* (*Lepidoptera:Tortricidae*)

[With 20 text-figs.]

Rewizja rodzaju *Henricus* BUSCK i opis *Parirazona* gen. n. (*Lepidoptera: Tortricidae*)

Abstract. The *Cochylidii* genus *Henricus* BUSCK is redescribed and the new genus *Parirazona* is erected for *Irazona penthinana* RAZ. Besides one new *Henricus* species is described, and *Irazona* RAZ. is synonymized with *Henricus*.

The genus *Irazona* RAZOWSKI (1964) described for *Conchylis comes* WALSINGHAM from Arizona and Mexican *Propira cognata* WALSINGHAM is synonymized with *Henricus*. In *Irazona* one Brazilian species was described by me (RAZOWSKI, 1967) and several further species by CLARKE (1968) from Central America. The mentioned Brazilian species requires, however, a new genus whose description is on p. 239. The redescription of *Henricus* is as follows.

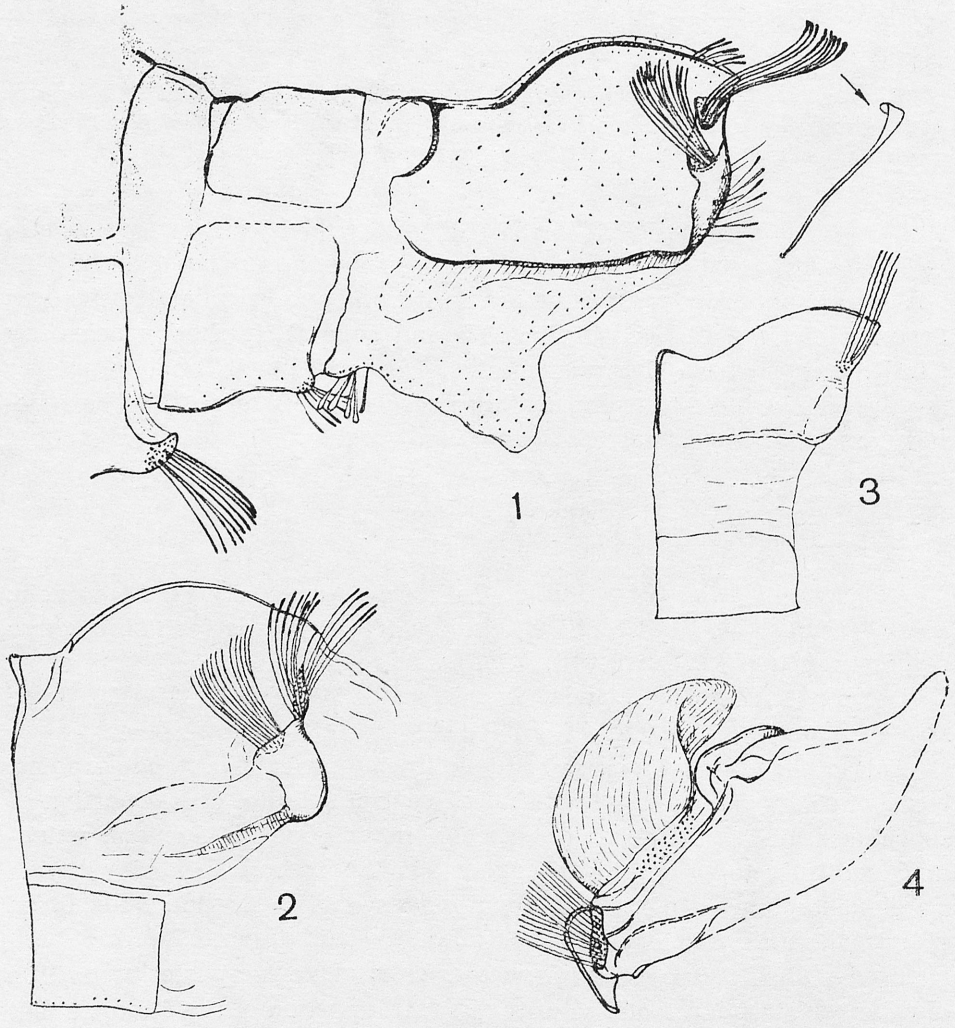
Henricus BUSCK

Henricus BUSCK, 1943, Bull. S. California Acad. Sci., **42:** 38 — nom. nov. for *Heinrichia* BUSCK, 1939, ibid., **38:** 103. Type species *Phtheochroa macrocarpana* WALSINGHAM, 1895.

Irazona RAZOWSKI, 1964, Annls zool. Warsz., **22** (16):356. Type species: *Conchylis comes* WALSINGHAM, 1884 — synon. nov.

This genus is characterized by the following probable autapomorphies: bases of socii connected by cup-shaped ventral sclerite; dorsal portion of sacculus armed with thorns or procese; inner edge of vinculum extending ventrally to form a plate connected with sacculus and developing an elongate patch from which scent scales extend; broad caulis fused with small or very small juxta; medio-lateral scent organ (c.f. p. 237) built of fused scales; pair of sclerotized processes of ventro-posterior portion of aedeagus; slender, distal sclerite of ventral portion of the 8 tergite that strenghten supporting sclerite of the scent organ. The following characters are treated as the convergenties: long scent scales of upper portion of socius; short, dentate apically and proximally median portion of tran-

stilla; posterior position of accessory bursa (usually extending from distal part of ductus bursae); anterior position of ductus seminalis extending from proximal or median part of corpus bursae. To the indefined characters belong: long, median sclerite of praegenital tergite separated from its anterior edge; small groups of scent scales extending from middle of distal edges of 6th and 7th sternites and expanding laterally basal portion of subscaphium. Three characters vary within the genus or are found only in some species. These are costal scent organ of valva, antemedian and postmedian groups of scales extending from forewing costa and dark dorsal suffusion connecting basal blotch and subtornal blotch in the forewing.



Figs. 1—4. Scent organs of *Henricus* BUSCK: 1 — abdominal organs of *H. powelli* sp. nov., 2 — same, last segment of *H. melanoleuca* CLARKE, 3 — same of *H. cognata* (WALSM.), 4 — lateral, praegenital organ of *H. melanoleuca* (WALSM.)

Bionomy. The food plants known to date are *Pinus* sp. (*melanoleuca*, cf. CLARKE, 1968) and *Quercus omissa* (*cognata*).

Distribution. Known from southern part of the U.S.A. (Arizona) to Costa Rica.

Comments. To *Henricus* belong pale coloured species with almost white ground colour of the forewing and the dark (green, brown or ferruginous) pattern. The males developed 6 different groups of the scent organs. The sternal groups of scent scales are situated on the ends of the 6th and 7th segments, medially. The scales are variably long, distinctly differentiated from the scales of the surrounding areas. In *powelli* some broader and longer than usually scales occur in anterior portion of the ventral surface of the praegenital segment. The tergal, abdominal scent organ is species specific and consists of two groups of altered scales extending from the distal edge of the lateral portion of the tergite at the end of variably large supporting sclerite (figs 1—3) and from a shallow dorsal invagination of the latter. The ventral portion of the mentioned sclerite fuses with variably long longitudinal rod. In two species (*comes, powelli*) the postbasal portion of the costa of valva is somewhat swallen and covered with long scales (fig. 5). The saccular scent organ is developed in the majority of the species (it is not realised with *cognata* and *platina*). It has a form of an elongate patch situated just beyond sclerite formed by ventro-median part of the vinculum from which large pencil of scales extends. Some of the scales are thread-shaped, the remaining ones are broad apically and their ends are fused (fig. 7). The most peculiar is the praegenital scent organ (fig. 4) situated just before middle of the vinculum arm, extending from the intersegmental membrane. Its outer part is polyhedral, somewhat elongate apically, concave dorso-posteriorly, built of completely confluent broad scales. Their sockets form an elongate, vertical area on the intersegmental membrane. The described cluster easily breaks off the membrane when washing the abdomen after maceration. This organ is probably characteristic of all *Henricus* species. The lack of the former (saccular organ) in two mentioned species is treated as secondary, as the specialized sclerite of the sacculus is in both cases preserved.

The upper surface of the sacculus is usually spined or dentate and the length and shapes of these spines are species specific. Only in one species (*melanoleuca*) that area is smooth but armed with long process. Further important specific characters are in the shape of the aedeagus and especially in its ventro-lateral processes. The females differ from one another mainly in the shape of the sterigma and the arrangement of the sclerites and thorns of the bursa copulatrix.

Of 8 known species 3 have been described from the females thus the systematic arrangement may be only provisional. One new species is described below.

Henricus powelli sp. nov.

Alar expanse 18—22 mm. Head white, outer surface of labial palpus mixed with cream, inner side, except for terminal joint dark grey-brown, distal part of vertex suffused with grey; thorax dark olive brown. Forewing white, diffusely marked with grey at middle of costa, beyond disc, before apical area and at apex; slight cream shade in median cell; pattern dark, olive brown, mixed with ochreous postbasally and postmedially; with basal blotch completely fused with dorsal suffusion to form a broad concavity; transverse fascias of refractive scales both on ground colour and pattern, being silvery grey on the lattern. Fringes white; hindwing pale grey-brown with paler fringes.

Male genitalia (figs. 5, 6): Socius large with slightly extending dorso--lateral corner and smooth inner edge; valva slender in distal portion, subtriangular, with strongly convex basal third of costa provided with scent organ; upper edge of sacculus minutely dentate. Aedeagus very large provided with pair of ventro-lateral processes hardly overlaping its ventral tip; very large, slightly curved cornutus accompanied by numerous thin cornuti in vesica; caulis proportionally small, fused with small juxta. Abdominal scent organs as on fig. 1.

Female genitalia (fig. 16): Lamella antevaginalis weakly sclerotized laterally; antrum broad, curved before ostium dorsally; sack-shaped prominence just before antrum in middle area of ductus bursae; proximal portion of the latter and distal part of corpus bursae sclerotized, provided with numerous longitudinal folds; corpus bursae with deep median concavity and numerous internal spines entering ductus bursae; accessory bursa extending from left side of ventral sack of ductus bursae; ductus seminalis from proximal portion of corpus bursae, dorsally.

Holotype, male: "Mex.: Nuevo Leon, 4 mi W Iturbide, 5500', IX-25-75 at light; J. POWELL, J. CHEMSAK & T. FRIEDLANDER"; paratypes, 1 female labelled identically as the male, 1 male and 3 females similarly so but dated 13/14 and 21.IX. and 1 female with label "Mex.: Tamalipas 12 mi SW Cd. Victoria, 4000', IX-17/18-76; J.A. CHEMSAK, J. POWELL at lights".

Comments. The saccular and praegenital lateral scent organs of the male well developed. The sexual dimorphism expressed also in the colour of the internal surface of the labial palpus which in male is grey-brown and in female cream. This species externally resembles *cognata* but is easily distinguished by dark, olive-brown forewing pattern. It is named in honour of Prof. Dr. Jerry A. POWELL of Berkeley who collected and provided valuable material of *Henricus*. The holotype and remaining material are deposited in the University of California, Berkeley.

Henricus melanoleucus CLARKE

This species was described from Puebla but is probably more widely distributed. In the examined material there are some examples from Sinaloa, Vera Cruz and Durango. They show, however, some differences to the types described and illustrated by CLARKE (1968). In some examples the forewing pattern is yellow ferruginous, continuous dorsally, in one, weak, greyish, interrupted dorsally. The genital differences are slight and could be treated as of infraspecific importance. The socius is characteristically dentate internally what is not mentioned in the original description. The lateral, praegenital scent organ as on fig. 4; the male genitalia on figs 7—10.

Henricus cognatus (WALSINGHAM)

This species has been collected in Durango, Mexico in several specimens. One of them bears a label with the food plant name: *Quercus omissa*. As the illustration of the male genitalia seem insufficiently accurate (RAZOWSKI, 1964). I am figuring (figs. 11—13) them for new. The most important character is the shape of the sublateral processes of the aedeagus. The female genitalia (figs 17—19) characterize with short antrum, rather weakly sclerotized ductus bursae and large, expanding ventrally corpus bursae armed with submedian sclerites and spines; ductus seminalis from anterior portion of corpus bursae at the border of sclerite; ductus of accessory bursa sublateral, extending from before antrum.

List of known species

H. comes (WALSINGHAM) — U.S.A.: Arizona
H. powelli sp. now. — Mexico: Nuevo Leon
H. melanoleucus CLARKE — Mexico: Puebla
H. platina CLARKE — Costa Rica
H. cognatus (WALSINGHAM) — Mexico: Vera Cruz
H. icogrammus CLARKE — Guatemala
H. turbulus CLARKE — Guatemala
H. ademonius CLARKE — Costa Rica
H. umbrabasanus (KEARFOTT) — U.S.A.: California
H. macrocarpanus (WALSINGHAM) — U.S.A.: California
H. infernalis (HEINRICH) — U.S.A.: New Mexico
H. brevipalpatus MCDUNNOUGH — Canada: Br. Columbia

Parirazona gen. nov.

Type-species: *Irazona penthinana* RAZOWSKI, 1967

The new genus is defined by the following probable autapomorphies: presence of semimembranous, spoon-shaped process of ventro-apical portion of socius; minutely spined or bristled inner edge of socius and convex distally, dentate median process of transtilla. As the convergenties are treated: presence of strong, capitate cornutus, free, expanding terminally arm of vinculum, weak prominence of distal portion of tegumen situated proximally to base of socius, weakly sclerotized, scobinate distal portion of sterigma and absence of defined lamella antevaginalis (represented by rather thick membrane). The characters of indefinite importance are dorsal situation of both ductus seminalis and accessory bursa and presence of semicircular sclerite of corpus bursae protecting the bases of these ducts.

The bionomy of the representatives of this genus remains unknown. The moths, as almost all tropical species, are on wing several times a year.

Distribution. To date known exclusively from Petropolis, Parana and Santa Catarina, Brazil.

Comments. The representatives of the new genus are easily distinguished from those of *Henricus* by dark anterior portion of the forewing and lack of distinct, separate dorsal pattern. The specific differences are very slight. Apart of the type species known from S.E. Brazil belongs here *P. dolorosa* (MEYRICK, 1932) described under the generic name *Phtheochroa* STEPHENS from Curitiba, Parana (Brazil).

Appendix

J.A. POWELL in "Checklist of *Lepidoptera* of America north of Mexico" (1983) listed in *Henricus* 4 KEARFOTT's species, viz., *Commophila fuscodorsana, C. contrastana, C. huachuacana* and *Phalonia bana,* not included in this paper. Of them only *huachuacana* was examined by me, and is transferable to *Trachysmia* GUENÉE.

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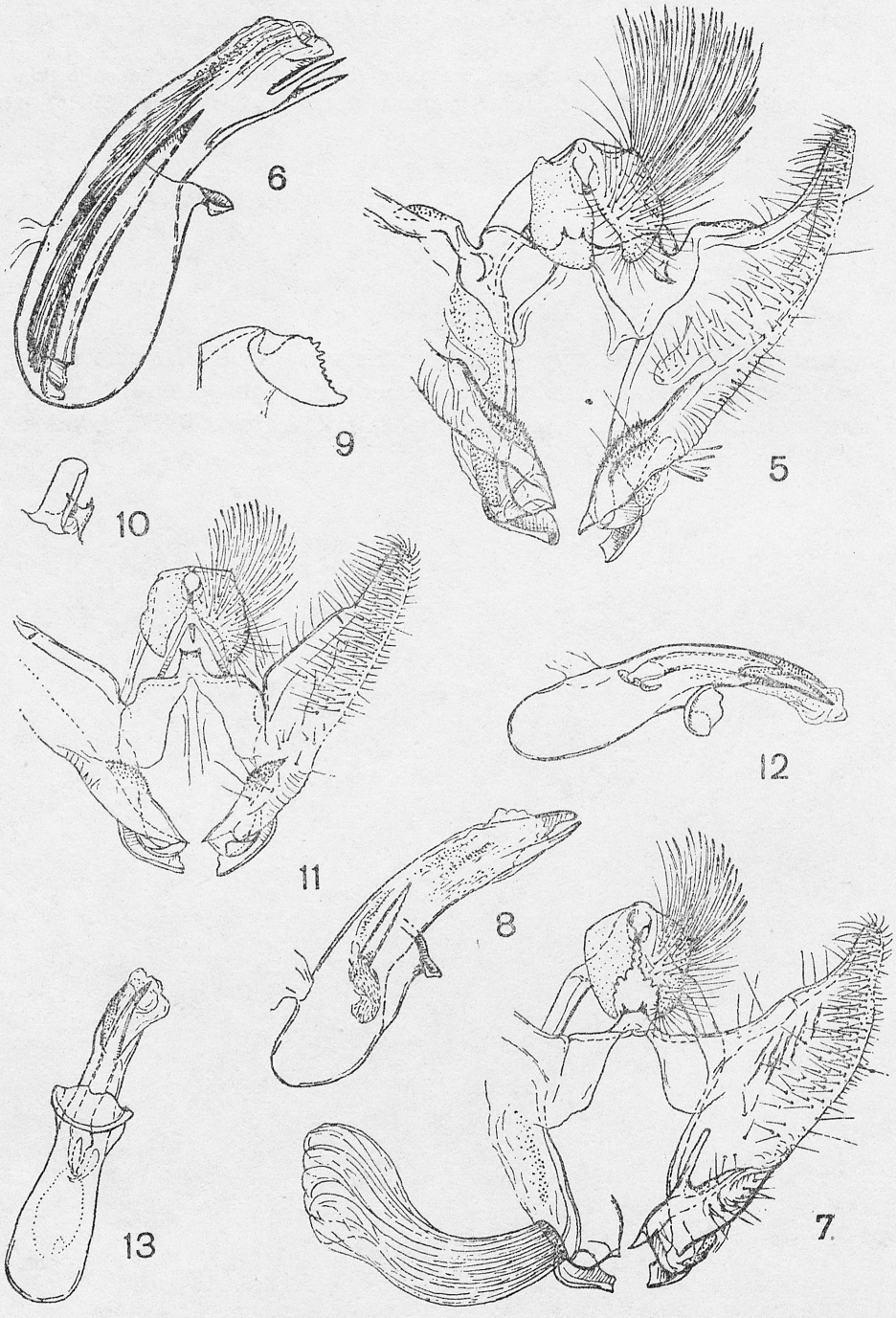
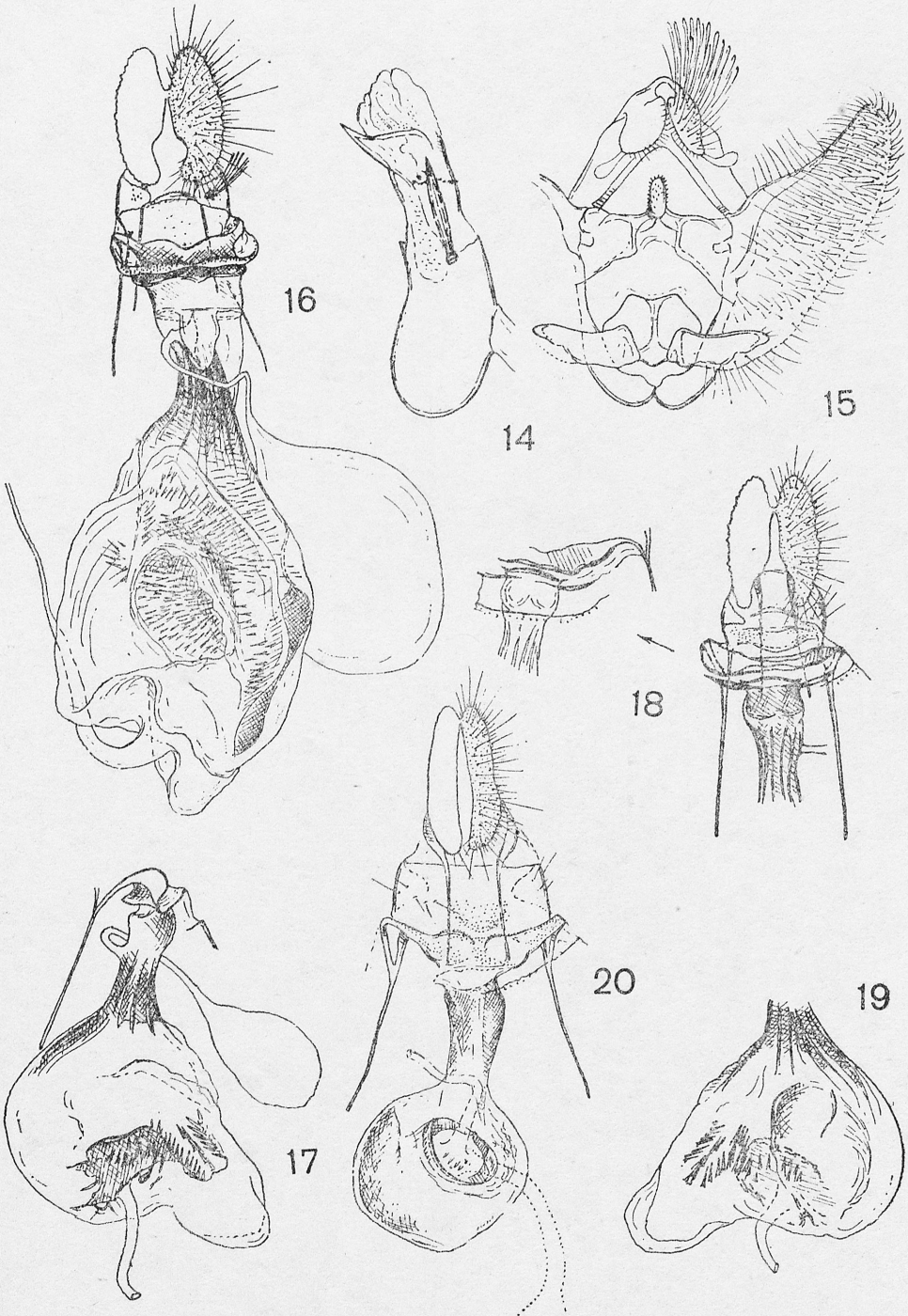
STRESZCZENIE

Praca zawiera redeskrypcję rodzaju *Henricus* BUSCK i opis nowego rodzaju *Parirazona*, a ponadto opis jednego nowego gatunku i przegląd dotychczas znanych gatunków obu rodzajów. *Irazona* RAZ. został zsynonimizowany z *Henricus*.

Redaktor pracy: prof. dr A. Krzanowski



Figs. 5—13. Male genitalia of *Henricus* BUSCK: 5, 6 — *H. powelli* sp. nov., holotype; 7—10 — *H. melanoleucus* CLARKE, Sinaloa: near El Palmito; 11—13 — *H. cognatus* (WALSM.), Durango: El Salto



Rigs. 14—20. Male and female genitalia: 14, 15 — *Parirazona penthinana* (RAZ.), Santa Catarina; 16 — *Henricus powelli*, sp. nov., paratype, Nuevo Leon; 17—19 — *H. cognatus* (WALSM.), Durango: El Salto; 20 — *Parirazona penthinana* (RAZ.) paratype, Salto Grande do Paranapanema