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DESCRIBED, AND NEW RECORDS
AND COMMENTS FOR OTHER
STRATEGUS AND
HISPANIORYCTES

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ABSTRACT

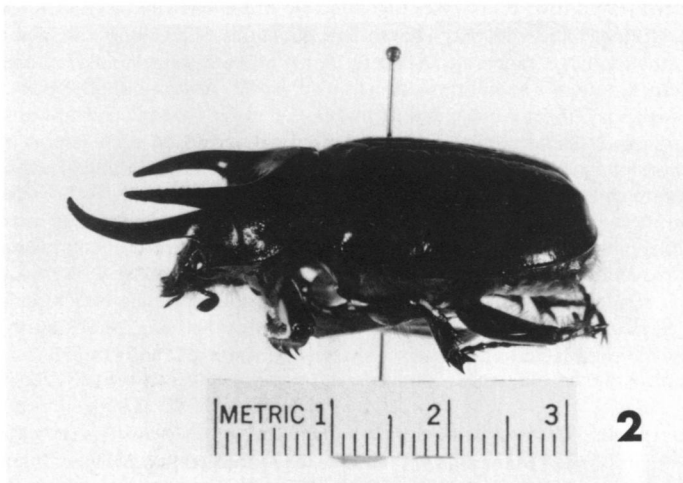
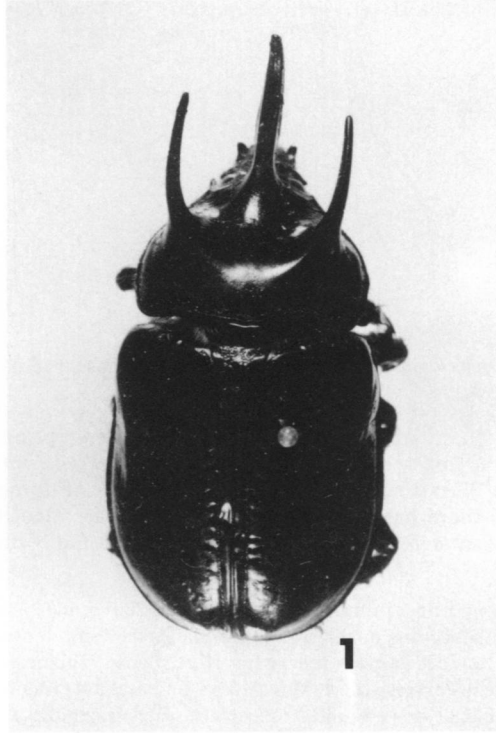
Strategus verrilli Ratcliffe was rediscovered on Dominica and is here redescribed, and a neotype is designated. A second specimen of *Strategus craigi* Ratcliffe (from the Huachuca mountains in Arizona) is reported and provides a new country record for this species. A female of *S. ajax* (Olivier) is reported from the Bahamas. *Strategus monguilloni* Voirin is reaffirmed as a synonym of *S. mandibularis* Sternberg, and the correct identification of the female allotype of *S. gracilis* Endrödi is questioned. *Hispanioryctes wittmeri* Howden and Endrödi is reported from Haiti.

Strategus verrilli Ratcliffe
(Figs. 1-4)

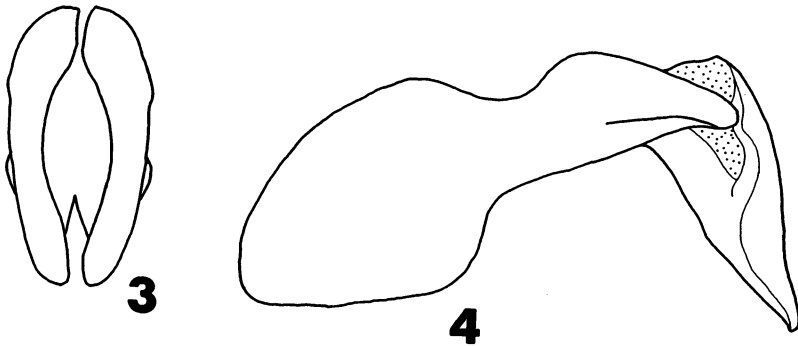
Verrill (1906) originally described this species as *Dynastes tricornis*. He later (1907) transferred *tricornis* to *Strategus*, but, unknown to him, the name was preoccupied; a secondary junior homonym was thus created. All of Verrill's *Strategus* type material was subsequently lost or possibly destroyed in a fire at the Verrill mansion (Kirby Brown, personal communication, 1974). Searches by Dr. Brown at Yale and myself at the MCZ, USNM, and AMNH failed to find any of Verrill's *Strategus* material. Moreover, *Strategus* have remained unknown from Dominica for the past 70 years. This latter fact is somewhat surprising in view of the more intensive collecting on Dominica begun in 1964 with the Bredin-Archbold-Smithsonian Survey of the insects of the island and with more recent collecting by French entomologists.

Ratcliffe (1976) replaced Verrill's homonym with a new name, predicted that the species was valid based on Verrill's published photographs, and indicated why it was not conspecific with any of the other closely related species in the region. Cartwright and Chalumeau (1978) suggested that *Strategus verrilli* and *S. siphax* (Fabr.) were perhaps conspecific. However, published illustrations (Ratcliffe 1976 and Verrill 1907) of the taxa clearly show coarsely punctate elytra in *S. siphax* and smooth and polished elytra in *S. verrilli* as well as a number of other differing characters. The suggestion by Cartwright and Chalumeau is not supportable by the information available to them.

On 31 December 1978, three males of a *Strategus* species were collected from a rotten tree stump at the Wet Area Experiment Station (St. Joseph Parish; 800' elevation) by Michael and LaDonna Ivie and Richard Miller (Ohio State University). The specimens proved to be the long lost *S. verrilli*. The then unassignable (but Dominican) female mentioned in my 1976 revision was



Figs. 1-2. *Strategus verrilli* Ratcliffe, dorsal and lateral views of NEOTYPE.



Figs. 3-4. *Strategus verrilli* Ratcliffe, caudal and lateral views of parameres.

collected at Middleham on 25 November 1901. A description of *S. verrilli* follows based on the above specimens; Verrill's original description was inadequate. A NEOTYPE is also designated in the interests of nomenclatural stability and because there has been some doubt about the identities of closely similar species of *Strategus*. The neotype is deposited at the National Museum of Natural History (USNM) in Washington, D.C.

Neotype. Male. Length 38.0 mm; width across humeri 20.0 mm. Color black, shining. *Head*: Front rugose, setigerous either side of middle; setae long, ferruginous. Clypeus with apex narrowly rounded, weakly reflexed; surface rugose. Tubercles conical, small, connected by a feeble, transverse ridge. Mandibles with basal lobe rounded; middle lobe a little larger, subtriangular, apex rounded; apical lobe small, triangular. Interocular width 2.66 transverse eye diameters. *Metasternum*: Anterior half setigerously punctate. *Pronotum*: Base with a narrow, transverse, rugopunctate band, band reduced at midline to basal bead. Disc aciculate, with only a few minute punctures. Sides along margin punctate; punctures small to large, moderate in density, some ocellate, some confluent, simple to crescent shaped. Anterior half of pronotum as disc. *Horns*: Anterior long, slender, attenuate (although very slightly expanded at middle), curving forward and upward, apex narrowly rounded; dorsal surface with a longitudinal carina on each lateral margin. Posterior horns long, slender, attenuate, apex narrowly rounded; in lateral view horns extend forward and upward at about 30° from plane of disc; in dorsal view horns diverge at base and then curve gently towards midline. *Elytra*: Sutural stria strongly impressed, wavy to subcrenulate. Disc aciculate, sparsely punctate, punctures minute; median half of disc with several weak, transverse rugae; lateral half with 2 broad, shallow, incomplete striae. Sides similar to median half of disc, with 3-5 small, ocellate punctures behind humerus. Apex sparsely punctate; punctures small, setigerous; setae short, ferruginous. *Pygidium*: Convex in lateral view. Surface sparsely punctate, punctures small to minute. Base and apical margin setigerously punctate and rugopunctate respectively. *Parameres*: Figs. 3-4.

Female. Length 34.3 mm; width across humeri 16.2 mm. As neotype except in the following respects: *Head*: Mandibles with middle lobe subequal to basal lobe. Interocular width 2.33 transverse eye diameters. *Pronotum*: Base with transverse, rugopunctate band reduced. Disc densely aciculate, moderately punctate; punctures small to moderate in size, becoming rugose laterally. Sides rugose. Anterior half rugose. Fovea shallow, sub-apical tubercle lacking. *Elytra*: Surface more distinctly punctate; punctures small, mod-

erate in density. *Pygidium*: In lateral view basal half weakly convex, apical half weakly concave. Surface rugopunctate to rugose.

Variation. Males (2): *Head*: Clypeus with apex narrowly subtruncate. Tubercles transverse, larger. *Horns*: Posterior horns in lateral view extend forward and upward at about 40° from plane of disc in one specimen to curving downward in other specimen.

Discussion. Male *Strategus verrilli* will key to couplet 28 and *S. oblongus* in my 1976 revision of the genus, but differences in the structure of the clypeus, posterior horns, elytra, and parameres will serve to separate these two species easily. Female *S. verrilli* will key to couplet 60, also *S. oblongus*, but again can be quickly differentiated by the differing form of the pronotum and elytra. The female of *S. verrilli* was unknown to Verrill.

The neotype is from the same basic type locality as Verrill's types. Verrill did not say exactly where his specimens were from on the island except to indicate from the "highest mountain slopes." The neotype is also consistent with what is known of Verrill's types based on his photographs and superficial description.

Strategus craigi Ratcliffe

Strategus craigi was described in 1976 based on a single specimen from the British Museum. It was collected in Jalapa, Mexico. An additional male specimen with the following data has recently been sent to me: "ARIZONA: Huachuca Mts., Carr Canyon, VII-18-1930, H.M. Smith." The Arizona record represents a range extension of approximately 1900 km to the NW as well as a new U.S. country record.

I believe this is one additional example whereby a species in the American southwest or northern Mexico has become isolated on a more benign mountain "island" which is surrounded by a "sea" of desert. Northward expansion of primarily Mesoamerican taxa was made possible during pluvial periods of the Pleistocene when suitable (for these taxa) habitat became continuous. Isolation occurred subsequently with the recovery of post-glacial vegetation about 12,000 years B.P. which caused significant disruption in this continuous, suitable habitat. See Ratcliffe (1976) for further discussion of *Strategus* zoogeography with particular reference to the above scenario and MacVean and Schuster (1981) for a similar example dealing with Central American Passalidae.

Since it has been 50 years since the Arizona specimen was taken, additional collecting is required to confirm whether *S. craigi* is still present in the United States.

The new specimen of *Strategus craigi* has an acuminate clypeus and so will key to *S. fallaciosus* in my 1976 key. The holotype in the British Museum apparently has a much worn, hence truncate, clypeus, a circumstance not uncommon in digging or burrowing beetles. The male parameres and other characters will serve to easily separate *S. craigi* and *S. fallaciosus*.

Strategus ajax (Olivier)

Strategus ajax is found commonly in Cuba (Ratcliffe 1976). A female specimen was taken at black light at Simons Point, Great Exuma Island, Bahamas, on 20 January 1980 by Tim L. McCabe (New York State Museum, Albany). This represents only the second known specimen of *Strategus* from the Bahamas. The other is the type of *Strategus atlanticus* Ratcliffe from San Salvador (Watling) Island collected in October 1891.

"The occurrence of *S. atlanticus* on San Salvador in the southern Bahamas is almost certainly the result of its ancestors being fortuitously rafted or wind-blown from Cuba, Hispaniola, or Puerto Rico where it has close relatives in *S. aenobarbus*, *S. ajax* and *S. talpa*. In spite of favorable currents for waif dispersal from the Greater Antilles, the Bahamas in general are probably not inhabited by *Strategus* because they are too low and dry" (Ratcliffe 1976). I will yet adhere to the above statement. *Strategus ajax* may be established on some habitable islands in the southern Bahamas, but if so, it remains rare. Great Exuma is 250 km north of Cuba, and the specimen in question could represent a displaced individual of Cuban origin.

Once again, additional collecting is needed to determine if *S. ajax* is established in the southern Bahamas. I would not be surprised if it is.

Strategus monguilloni Voirin

Strategus monguilloni Voirin (1978) was described based on a single specimen from Brazil. Dechambre (1979) quickly placed it into synonymy with *S. mandibularis* Sternberg. I heartily agree with Dechambre's action.

Strategus gracilis Endrödi

Endrödi (1976) described this species based on a male from Mexico and a female from St. Croix in the Greater Antilles. Based on Endrödi's description, the male appears to be a good species. However, I take exception to placing an unassociated female from one location with a holotype from another locality greatly removed. None of the Antillean species of *Strategus* occur on the mainland (Mesoamerica or South America), and none of the mainland species also occur in the Antilles. This kind of disparate distribution occurring for *S. gracilis* is extremely unlikely. I cannot see how it is possible to conclude that a female specimen from the Antilles is conspecific with a new species described from Mexico. Examination of the allotype of *S. gracilis* may reveal that it is *S. talpa* (Fabr.) which is found on St. Croix.

Hispanioryctes wittmeri Howden and Endrödi

Howden and Endrödi (in Howden 1978) described *H. wittmeri* based on 15 specimens from the Dominican Republic on the island of Hispaniola. I have an additional specimen from the west end of Hispaniola which constitutes a new political boundary record: "N. Haiti, Mt. Basil, 4700', IX-9-1934, P. Darlington." This species is closely associated with the Cordillera Central and is apparently not abundant.

ACKNOWLEDGMENTS

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