Oospila bulava, a new emerald geometrid moth from South America (Lepidoptera, Geometridae, Geometrinae)

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Warren (1897) described the genus Oospila for Phorodesma trilunaria Guenée, 1857 from Brazil. Prout (1912; 1932–1933) revised the genus, listing 48 species in the first publication and 58 species in the latter one, in Oospila. Cook and Scoble (1995) grouped eight related genera under Oospila, including 73 species and dividing these into 13 species groups. Pitkin (1996) relied on this revision while publishing a monographic review of the Neotropical geometrine genera. Parsons et al. (1999) attributed the same species that in Cook and Scoble (1995) to the genus. Two species are described later (Viidalepp, 2002; Lévèque & Viidalepp, 2015). While revising collections from the Neotropical region during the last decade, the authors of the present article have found several undescribed taxa: cryptic species are frequently overlooked in large-scale works (Vodă et al., 2014). The result of one case study is published in this article. The primary and subsequent descriptions of relevant taxa are consulted.

The material for this article was collected by A. Lindt and T. Tasane during their field work in Western South America, 2003–2013. The moths were mounted and labelled for a subsequent investigation by A. Lindt (EMNH, Tallinn). The green geometrids are susceptible to fading in collections. The mounting of deep-frozen and dried emerald moths is somewhat tricky; the method used by A. Lindt includes injecting some water into the thorax, followed by keeping the moth in a container with high humidity for 1–2 hours, and finally desiccating the mounted sample at around 60°C for about 12 hours. Such specimens retain their green pigment unfaded in collection conditions.

Description of the new species
Oospila bulava Lindt & Viidalepp, sp. nov. (Figs A–C)

Holotype: female, Ecuador, Napo prov., Carlos Julia, 950 m, 10.02.2008, 01º15’33’S, 77º49’27”W, Type id. TAMZ0094300 (A. Lindt). Paratypes: 1♂, Bolivia, Puerto Chore, 230 m, 08.10.2010, 16º59’55”S, 64º09’07”W (slide 259) (A. Lindt); 1♀, Bolivia, Sarapiumi, 850 m, 28.10.2010, 15º24’43”S, 68º04’57”W (slide 289) (A. Lindt); 1♂, Bolivia, Refugio Volcanes, 1460 m, 25.11.2013, 18º07’32”S, 63º35’53”W (A. Lindt); 1♀, Peru, Tarapoto, 1000 m, 05–06.12.2003, 06º27’30”S, 76º17’15”W (A. Lindt).

The holotype is deposited in the EMNH (Estonian Museum of Natural History’s) collection, Tallinn, Estonia. The paratypes are deposited in the Estonian Museum of Natural History’s collection, in the private collection of A. Lindt, and in the IZBE insect collection housed in the Estonian University of Life Sciences.

Diagnosis. Wings semi-transparent, plain green with fine brownish striegulation and a thin white marginal line; blotches absent. Slender valva, with a long, apically bulbed and spiculose appendage; sternite A8 with two triangular, pointed projections to its posterior edge.

Description. Moths (Fig. A): Wingspan, males 19–22 mm, females 25–26 mm. Head: The palpi are brown, projecting before the frons; the frons is brown below and dark brown above; the interantennal fillet is white with scattered red-brown scales; and the vertex is green with a reddish-brown line between. The antennae in both sexes are pectinated, antennal shaft is light brown. Diameter of the shaft is 0.2 mm; the length of internal and external rami at the tenth antennal segment in the male is 0.75 mm and 1.0 mm, and in the female 0.5 mm and 0.65 mm, respectively. Thorax and abdomen: The thorax and abdomen are green, abdominal tergites 1–5 bear large dark brown crests which are ringed with white and inlaid by some long white hairscales. The male hind legs are slender, without a hair pencil and with one (distal) pair of spurs. The wings are light green, with some long green hairscales embedded between flat scales, being less numerous in the hindwings, and sparsely striated transversely with brown. The costal edge of the forewing is lined in