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NEW SPECIES OF RHINOTRAGINI AND HETEROPSINI AND A NOTE ON *TRACHELISSA MACULICOLLIS* (TRACHYDERINI) (COLEOPTERA, CERAMBYCIDAE, CERAMBYCINAE)

ROBIN O.S. CLARKE¹

ABSTRACT

New species of Rhinotragini and Heteropsini and a note on the Trachyderini Trachelissa maculicollis (Coleoptera, Cerambycidae, Cerambycinae). New species described from Bolivia: Neoregostoma giesberti sp. nov., Erythropterus boliviensis sp. nov. and E. kochi sp. nov. A brief description of adult behaviour and a melanic form of Trachelissa maculicollis (Audinet-Serville, 1834), and a key to the species of Erythropterus are added.

KEYWORDS: Cerambycidae; Rhinotragini; Heteropsini; New species; Trachyderini.

INTRODUCTION

The material examined was collected at the Hotel Flora & Fauna, 420-440 m, 5 km SE of Buena Vista, Department of Santa Cruz, Bolivia. This hilly locality lies in disturbed transition forest (Semideciduous Chiquitano Forest and Tropical Humid Forest), 16 km from the foot of the eastern Cordillera of the Andes.

Measurements: Total length = length of head from tip of mandibles to front of pronotum + length of pronotum + length of elytra.

The acronyms used in the text are as follows: Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, Brazil (DZUP); Florida State Collection of Arthropods, Gainesville, Florida, USA (FSCA); Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre, Brazil (MCNZ); Muséum National d'Histoire Naturelle, Paris

(MNHN); Museo Noel Kempff Mercado, Universidad Autónoma Gabriel René Moreno, Santa Cruz de la Sierra, Bolivia (MNKM); Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil (MNRJ); Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil (MZSP); Robin Clarke/Sonia Zamalloa private collection, Hotel Flora and Fauna, Buena Vista, Santa Cruz, Bolivia (RCSZ).

Rhinotragini

The Neotropical genus *Neoregostoma* Monné & Giesbert, 1992 contains seven species recorded for South America: French Guiana, eastern Brazil (Goias, Minas Gerais, Espírito Santo, Rio de Janeiro, Paraná and Rio Grande do Sul), Paraguay, Argentina and Uruguay. The species described here from the Andean foothills of lowland Bolivia represents a significant range extension for this genus.

1. Hotel Flora & Fauna, Casilla 2097, Santa Cruz de la Sierra, Bolivia. E-mail: hotelfandf@hotmail.com

***Neoregostoma giesberti* sp. nov.**

(Figs. 1, 2)

Etymology: This new species is dedicated to the memory of Edmund F. Giesbert whose study of the Bolivian Cerambycidae was unprovidentially cut short.

Male: General colour: orange and black. Head, most of prothorax, underside and legs orange. Head behind and between superior lobes with black crescent. Antennal segments I-IV shining black, V-VII dull black, VIII-XI dull orange. Pronotum with black band to either side of centre, each band running from front margin almost to hind margin, narrow at front, widest at middle. Elytra and scutellum black, elytron with orange spots: a circular spot adjacent to scutellum but not reaching humerus or suture; an irregularly rounded spot centred on boundary of basal/middle third, not reaching suture, with oblique extension towards epipleur; a wide band excised at middle of front and hind borders on apical third, forming a transverse, W-shaped band across both elytra, including epipleurs and suture.

General puncturation: heavy on dorsad, pro- and mesosterna less so, legs, metasternum and urosternites impunctate, or almost so. Head between eyes, vertex, and genae closely punctate and somewhat carinate; frons strongly sulcate; sulci smooth but irregular, mostly parallel but also dividing and joining to cut off rounded, punctate areas. Pronotum covered with dense, large, deep, alveolate punctures, some on basal third of pronotum with very short setae; surface smooth and shining, centre of pronotum with elongate smooth area on basal half. Elytral punctures similar to pronotum, on apical half many anastomised into rows; interstices, humeri and adjacent epipleurs smooth and shining. Underside irregularly punctured: pro- and mesosternum reticulate, prosternum, mesepisternum and metepisternum with moderately large, shallow punctures. Mesosternum finely and densely punctured (20x); metasternum smooth and shining with scattered punctures, on metepimeron these closer; urosternites devoid of punctures, except urosternite V with small patch of fine, dense, pubescent punctures at middle of apex.

General pubescence: mostly fine, short on genae, antennae and parts of sterna; dense at centre of prosternum, mesosternum (and their processes) and narrow band to either side of metasternal suture; especially long and dense on mesepimeron.

General form: elongate, head strongly rostrate; eyes large, inferior lobes half as long as genae, separated by

their own width; superior lobes with 11-12 rows of fine ommatidia, separated by almost three times their own width.

Antennae relatively short, reaching middle of elytra. Segments I-IV cylindrical or subcylindrical, scape and pedicel glabrous with large punctures and smooth interstices, III-IV subglabrous with dense irregular punctures; V-X wider, subserrate, densely clothed with short pubescence. Scape one quarter shorter than antennomere III, III almost twice as long as IV, IV slightly shorter than V.

Pronotum convex, disc depressed, slightly transverse, front margin narrower than hind margin; sides rounded, widest at middle, basal fifth strongly declivous with small fossa adjacent to hind angle.

Elytra subconvex, depressed, slightly expanded from middle to apices, exposing apical tergite; with costa from humerus to apex, partially erased by heavy punctures; apices rounded with small blunt tooth at sutural angle. Scutellum rounded with shallow sulcus at middle, microscopically punctate-reticulate (40x).

Underside: prosternal process arched, one third as wide as coxal cavity, triangular apex large. Mesosternal declivity strong, sternal process parallel sided with bilobed apex, base half as wide as coxal cavity. Metasternum large, convex with complete longitudinal suture. Abdomen strongly convex, widest at base, urosternites decreasing in size from base to apex.

Legs: orange; strongly pedunculate and clavate, peduncle short on profemur, longer on mesofemur, and longest on metafemur; femora smooth, shining, almost impunctate, with small band of punctures encircling apices, most developed on profemora where these punctures alveolate.

Female: more robust, wider and less elongate in appearance; urosternites suffused dusky; inferior lobes separated by twice their own width; antennae more robust and shorter, just passing basal third of elytra, and colour distribution variable; pronotum more transverse.

Measurements (mm), male/female respectively: total length 10,5-11,9/11,8-12,5, length of pronotum 2,0-2,4/2,3-2,5, width of pronotum 2,1-2,5/2,4-2,8, length of elytra 6,2-7,4/7,2-7,5, width at humeri 2,5-2,9/2,7-3,2.

Type material: Holotype male, BOLIVIA, Santa Cruz: Hotel Flora & Fauna, 5 km SSE of Buena Vista, 17°29'96"S/63°39'13"W, 430 m, 1.V.2005, R. Cla-

rke & S. Zamalloa col., specimen 1A in coitus with specimen 1B, on flower of "Bejuco hoja lanuda" (MNKM). Paratypes. All 23 paratypes bear the same data as the holotype unless otherwise stated. 2 males 20.IV.2005 (DZUP); 2 males 21.IV.2005 (FSCA); 2 males 23.IV.2005 (MCNZ); 2 males 26.IV.2006 (MNHN); 1 female 1.V.2005 specimen 1B in coitus with specimen 1A (MNKM); 1 male 14.V.2005 specimen 3A in coitus with 3B, 1 female 14.V.2005 specimen 3B in coitus with 3A, 2 males 21.IV.2005 (MNRJ); 1 male 2.V.2005 specimen 2A in coitus with 2B, 1 female 2.V.2005 specimen 2B in coitus with 2A, 2 males 21.IV.2005 (MZSP); 1 male 20.IV.2005, 5 males 21.IV.2005 (RCSZ).

All twenty-four examples of *Neoregostoma giesberti* sp. nov. were netted as they approached, or rested on the flowers and stems of the vine *Gouania mollis* Reissek (RHAMNACEAE), known locally by the name "Bejuco hoja lanuda", in transition Chiquitano Forest.

Comment: *Neoregostoma giesberti* could probably be placed in its own genus, but it seems more prudent to avoid this pending revision of this genus, together with *Rhinotragus* Germar, 1824, *Erythroplatys* White, 1855 and *Oregostoma* Audinet-Serville, 1833, genera characterised by somewhat tenuous criteria.

Heteropsini

The Neotropical genus *Erythropterus* Melzer, 1934 contains three species: *E. urucuri* Martins & Galileo, 2004 from Venezuela, *E. cuiysi* Napp & Monné, 2005 from north-western Brazil (Rondônia), and *E. amabilis* Melzer, 1934 from southern Brazil, Paraguay and Argentina. Napp & Monné (2005) provide a redescription of the genus and a key to the species. The author examined paratypes of *E. amabilis* and *E. urucuri* held at the Museu de Zoologia, Universidade de São Paulo. The adequate description of *E. cuiysi* given by Napp & Monné it was possible to verify the status of the two new species described here.

The new species of *Erythropterus* were netted when flying to, or feeding on, the flowers of vines and trees: *Erythropterus boliviensis* sp. nov. from "Bejuco Hoja Lanuda", *Gouania mollis* Reissek (RHAMNACEAE) from Chiquitano Forest; and from Tropical Humid Forest, *Erythropterus kochi* sp. nov. from "Barbasquillo" vines, *Serjania lethalis* St. Hilaire, and the trees: "Sama Blanca Chica", *Matayba guianensis* Aublet, "Sama Blanca", *Cupania cinerea* Poeppig & Endl. (these three plants SAPINDACEAE), and "Turere", *Rhamnidium elaeocarpum* Reissek (RHAMNACEAE).

Erythropterus boliviensis sp. nov.

(Figs. 3, 4)

Male: Head, prothorax, scutellum and basal two-thirds of elytra crimson; apical third of elytra, ventrad, antennae and legs black.

Front elongate, closely punctured, punctures with short setose pubescence (40x). Genae half as long as inferior lobes of eyes. Antennae surpass apex of elytra by 1,5 segments. Scape cylindrical, densely punctured, 1/4 shorter than III, 1/5 longer than IV, shorter than V. Antennomeres III-V shining and bicarinate, almost impunctate between the carinae, the rest with shallow elongate punctures. Antennomere III more than half as long again as IV and slightly longer than V-XI; V-X expanded at apical angle.

Prothorax slightly transverse, regularly rounded at sides, widest behind middle, front margin slightly narrower than hind margin. Pronotum closely and shallowly punctured at sides and front of disc, irregularly and less densely punctured at base of disc, punctures alveolate and often confluent. Prosternum almost glabrous, pubescence only distinct on intercoxal process, irregularly and coarsely punctured. Mesosternum, metasternum and urosternites densely and finely pubescent and punctured, metasternum and urosternites with scattered larger punctures, those on urosternites indistinct.

Elytra entirely covering abdomen, moderately convex to apex, humeral projection rounded, apices somewhat acuminate, tips slightly sinuate at apex, sutural angle rounded, not toothed, outer angle furnished with small conical tooth, much longer and peg-like in some examples; densely punctate, asperate for apical third; undersurface with two pale vittae running from base to black band. Epipleura not reflexed, weakly sinuous behind humeri and covering metepisternum. Scutellum slightly acuminate, glabrous, impunctate.

Femora with dense, shallow, alveolate punctures, microsculptured. Meso- and metafemora slender and weakly clavate, peduncles strongly carinate; metafemora surpassing apex of elytra. Metatibia finely carinate on internal and external sides. Metatarsus elongate, tarsomere I equal in length to the following combined.

Female: Antennae shorter, reaching apical third of elytra (middle of third urosternite).

Measurements (mm), male/female respectively: total length 8,3-10,7/9,7-11,3; length of pronotum 1,4-1,9/1,6-1,9; maximum width of pronotum

1,5-2,0/1,6-2,1; length of elytra 5,4-7,1/6,5-7,7; width at humeri 1,7-2,2/1,9-2,4.

Type material: Holotype male, BOLIVIA, Santa Cruz: Hotel Flora & Fauna, 5 km SSE Buena Vista, 17°29'96"S/63°39'13"W, 440 m, 5.V.2005, R. Clarke/S. Zamalloa col., flying to/on flowers of "Bejuco Hoja Lanuda" (MNKM). Paratypes with same data as holotype, 1 male 29.IV.2007 (DZUP); 1 male 10.V.2005 (MCNZ), 1 male 10.V.2005, 1 female 2.V.2007 (MNRJ); 1 male 11.V.2005, 1 female 19.IV.2007 (MZSP), 1 male 29.IV.2005, 1 female 11.V.2005 (RCSZ).

Discussion: In the key to the species of *Erythropterus* given by Napp and Monné (2005) the opening option separates *E. cuiysi* from the other species: "Antennae of males longer than body". The antennae of male *E. boliviensis* are also longer than the body and it shares other characters with *E. cuiysi* that clearly separate these two species from *E. amabilis* and *E. urucuri* as follows: i) sides of the prothorax are rounded and maximum width is closer to middle, ii) elytral epipleura completely cover metepisterna, iii) meso- and metafemora with slender claws, and iv) metafemora surpass apex of elytra (a character shared with *E. kochi* sp. nov.). Although apparently related to one another *E. boliviensis* displays characters clearly separating it from *E. cuiysi*, as follows: elytra subconvex and completely cover abdomen and external apical tooth usually well developed, even peg-like in some specimens; antennomere III longer than XI, meso- and metafemora both densely and strongly punctured with carinate peduncles; and colour distribution is different: head and prothorax crimson, not black; black band at apex of elytra begins just in front of apical third, in *E. cuiysi* it falls entirely within apical quarter.

***Erythropterus kochi* sp. nov.**

(Figs. 5, 6)

Etymology: This species has been named after Paul Koch, stalwart companion of many field trips.

Male: Head, scutellum, apical tenth of elytra, centre of prosternum, mesosternum, metasternum, urosternites, antennae and legs black; rest of elytra and pronotum crimson, the latter often suffused dusky.

Front elongate, closely punctured, punctures with short setose pubescence (40x). Genae less than half as long as inferior lobes of eyes. Antennae reach apical fifth of elytra (base of fourth urosternite). Scape cylindrical, densely punctured, one third short-

er than III; subequal to IV, shorter than V. Antennomeres III-V shining and bicarinate, uniformly punctate-reticulate. Antennomere III half as long again as IV, longer than V-XI, VI-X expanded at apical angle.

Prothorax slightly elongate, sides rounded anteriorly, almost parallel sided for basal half, widest at basal third, front margin narrower than hind margin. Pronotum closely punctured throughout; punctures regular, shallow, alveolate, not confluent.

Prosternum sparsely pubescent, denser on intercoxal process; regularly and coarsely punctured. Mesosternum, metasternum and urosternites densely and finely pubescent, mesosternal process, centre of metasternum and urosternites with longer, erect hairs; punctures fine and dense, mixed with moderately close, larger punctures on metasternum.

Elytra not covering entire abdomen, exposing apical tergite, flattened, humeral projection acuminate; apices truncate, outer and sutural angles furnished with small spines, almost absent in some examples; glabrous; densely punctate, interstices distinctly microsculptured; sutural borders parallel at apex. Epipleura reflexed, moderately sinuous behind humeri, exposing metepisternum. Scutellum rounded, glabrous, impunctate.

Femora alveolate, punctures microsculptured, interstices smooth. Meso- and metafemora slender, moderately clavate, peduncles carinate. Metafemora distinctly surpassing apex of elytra. Metatibiae finely carinate on internal and external sides. Metatarsus elongate, first tarsomere longer than the following combined.

Female: antennae shorter, reaching apical third of elytra (base of second urosternite); antennomere III distinctly longer than V-XI.

Measurements (mm), male/female respectively: total length 7,7-10,1/8,4-10,2; length of pronotum 1,4-2,0/1,6-2,0; maximum width of pronotum 1,3-1,8/1,4-1,9; length of elytra 4,9-6,3/5,3-6,5; width at humeri 1,3-2,1/1,7-2,1.

Type material: Holotype male, BOLIVIA, Santa Cruz: Hotel Flora & Fauna, 5 km SSE Buena Vista, 17°29'96"S/63°39'13"W, 420 m, 7.X.2005, R. Clarke/S. Zamalloa col., flying to/on flowers of "Sama Blanca Chica" (MNKM). Paratypes with same data as holotype, 1 male and 1 female 8.X.2005 (DZUP); 1 male and 1 female 7.X.2005 (FSCA); 2 males and 3 females 9.X.2006 (MNHN); 1 female 8.X.2005 (MNKM); 1 male 7.X.2005, 1 female 8.X.2005 (MNRJ); 1 male 7.X.2005, 1 female 8.X.2005 (MZSP); 1 male and 1 female 8.X.2005, 1 male 17.X.2006, 4 males and 1

female 18.X.2006, 2 males and 1 female 19.X.2006, 1 male 21.X.2006 (RCSZ). Paratypes visiting different plant from holotype: 1 male 26.X.2005, 1 female 30.X.2005, on flowers of "Sama Blanca" (MCSZ); 1 female 29.VIII.2005, on flower of "Barbasquillo" vine (RCSZ); 1 female 9.X.2005, on flower of "Turre" (RCSZ); 1 male 7.XI.2005, 1 female 8.XI.2005, on flower of "Sama Blanca" (RCSZ).

Discussion: *Erythropterus kochi* sp. nov. is closely related to *E. urucuri*, differing in the distribution of black pigment, length of metafemora and metatarsi, and other differences requiring further comment.

The head of *E. kochi* is always entirely black; pronotum is crimson and often suffused dusky; the centre of prosternum is broadly black, the colour intense and contrasting with the crimson sides of the pronotum by well marked borders. The head of *E. urucuri* is entirely black or may be suffused reddish; prothorax and elytra reddish orange, not crimson, and pronotum not suffused dusky; and only the extreme tip of elytra are darkened by a dusky suffusion,

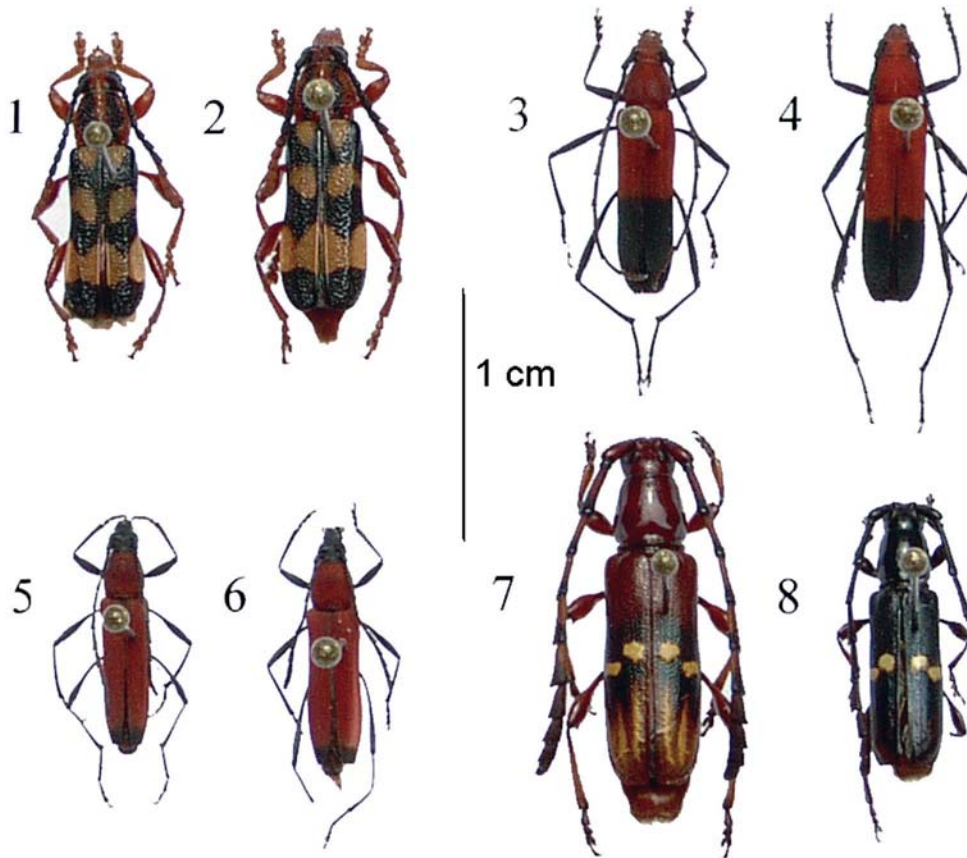
whereas in *E. kochi* the dark apical band is considerably wider and black.

The length of the metafemora (whether or not they surpass the apex of the elytra) is a character given importance by Napp and Monné (2005) in their key. The metafemora of *E. kochi* clearly surpass the apex of the elytra, those of male *E. urucuri* just attain the apex of the elytra and those of the females fall short.

The metatarsus of *E. kochi* are considerably longer than those of *E. urucuri*, the ratio of tarsal length to length of metatibia is 7:10, in *E. urucuri* it is 6:11; and the first metatarsomere of *E. kochi* is equal in length to the following combined (both 3,6 units), in *E. urucuri* it is shorter than the following combined (2.4:2.9 units).

In *E. kochi* the sides of the pronotum are less rounded than those of *E. urucuri*, which are somewhat irregularly curved, even slightly sinuate at middle in some examples, then rounded to base.

In *E. kochi* the apices of the elytral do not diverge from one another, the suture remains straight



FIGURAS 1-8: 1-2. *Neoregostoma giesberti* sp. nov., paratypes, 1. male, 2. female; 3-4. *Erythropterus boliviensis* sp. nov., paratypes, 3. male, 4. female; 5-6. *Erythropterus kochi* sp. nov., paratypes, 5. male, 6. female, 7-8. *Trachelissa maculicollis* (Audinet-Serville, 1834), 7. normal form, 8. melanic form.

to apex, in *E. urucuri* the apices diverge away from the suture to form a distinct angle between them.

The differences between *E. kochi* and the other species of the genus are outlined in the discussion under *E. boliviensis* and given in the key to the species.

The key which follows is a basic one which I believe will compliment the key given by Napp and Monné (2005), and is justified by the lengthy discussions given under each of the Bolivian species.

Key to the species of *Erythropterus* Melzer, 1934

1. Pronotum black..... 2
Pronotum crimson, sometimes suffused dusky.. 3
2. Prothorax widest near middle, sides regularly rounded. Apical 1/4 of elytra black. Brazil (Rondônia)..... *E. cuiysi* Napp & Monné, 2005
Prothorax widest within basal third, sides only rounded behind middle. Apical 1/10 of elytra black. S and SE Brazil, Paraguay, Argentina.....
.....*E. amablis* Melzer, 1934
3. Elytra only slightly flattened, entirely covering abdomen and metepisterna. Apical third of elytra black. Bolivia (Figs. 3, 4)..... *E. boliviensis* sp. nov.
Elytra distinctly flattened, not entirely covering abdomen nor metepisterna. Only apices of elytra black or dusky 4
4. Centre of prosternum black. Bolivia (Figs. 5, 6)
.....*E. kochi* sp. nov.
Prosternum crimson. Venezuela.....
.....*E. urucuri* Martins & Galileo, 2004

Trachyderini

Trachelissa maculicollis (Audinet-Serville, 1834)

(Figs. 7, 8)

This is the first published record for this locally common species in Bolivia. The adults are attracted to the nectaries of flowering *Calliandra haematocephala* Hasske (MIMOSACEAE) during the months of August and September and are most active from 09:30-11:00 am (when pairs were seen mating) and 17:30-18:30 pm. Adults appear to be attracted to clumps of deformed fruiting bodies, when present, as many individuals have been seen to collect in them. In one of these an unusual melanic specimen (Fig. 8) was collected.

Although *C. haematocephala* has been introduced into many parts of the world, Bolivia is the only country where this shrub is known to occur in the

wild (Nee, unpub.). It would be interesting to know whether or not this species has been found regularly on any other plant species in South America.

Resumo

Novas espécies de Rhinotragini e Heteropsini e nota sobre Trachelissa maculicollis (Trachyderini) (Coleoptera, Cerambycidae, Cerambycinae). Novas espécies descritas da Bolívia: Neoregostoma giesberti sp. nov., Erythropterus boliviensis sp. nov., Erythropterus kochi sp. nov. Descreve-se resumidamente o comportamento dos adultos e de indivíduo melânico Trachelissa maculicollis. Acrescenta-se chave para as espécies de Erythropterus.

PALAVRAS-CHAVE: Cerambycidae; Rhinotragini; Heteropsini; New species; Trachyderini.

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