

ALTICINAE OF NEW GUINEA IV (Coleoptera : Chrysomelidae)¹

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Abstract : *Setsaltica*, n. gen., and 2 species contained therein are described as new. Both species are from mountains in the NE sector of New Guinea and they are associated with the same plant host species, *Cyathea muelleri*, a treefern. The alticines are keyed and illustrated.

This article supplements the previous installment on the Alticinae of New Guinea (Samuelson 1969). Treated here is a new genus, *Setsaltica*, which is erected for the reception of the 2 new alticines described below. The new genus is keyed in the previous installment as "genus" in couplet 9 on page 34.

The name of the new genus is but a small token to the memory of Miss Setsuko Nakata who dedicated nearly half of her life in devoted service to the Entomology Department of Bishop Museum.

Acknowledgments are due to Mr Keith Wade, Australian National University, Canberra, for giving me spot identifications of host plants in June 1967 at the A. N. U. Field Station at Aunde Lake near Mt Wilhelm and to Mr John Womersley, Chief, Division of Botany, Lae, for distributional data on the treefern, *Cyathea muelleri*. Mr Alan D. Hart, Bishop Museum, prepared the illustrations.

Genus *Setsaltica* Samuelson, new genus

Alticinae. Eumolpiform facies. *Head* barely exerted; maxillary palpus stout: segment 1 conical, broadened apically, 2 robust, 3 robust, narrowed to acute apex; front rather flat, frons triangular; antennal groove distinct (=sulcus at side of frons); eye large, elongate-oval, not exerted above curvature of front; interantennal space narrower than transverse diameter of antennal socket; postantennal swellings obsolescent. *Antenna* less than $0.5 \times$ as long as body; segment 1 long, thickened apically, length exceeding combined lengths of 2+3 but not 2+3+4; apical segments robust. *Prothorax* transverse, lacking ante-basal impression; basal margin bisinuate. *Elytron* with 9 discal serial rows of punctures + 1 short sutural row; lateral puncture row obsolete. *Ventral surfaces*: procoxal cavities open behind, intercoxal piece of prosternum transverse; mesosternum visible as a declived transverse flat plate with anterior part disappearing beneath prosternum. *Legs*: procoxa lacking protuberances; profemur with basal 1/3 much narrower than remainder; metafemur only moderately swollen near middle; metatibia with surface briefly concave at extremity for reception of basitarsus; basitarsus not as long as remainder; claw appendiculate.

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Type-species: *S. cyathea*, n. sp.

Differs from members of related genera by eumolpiform facies; differs from *Profebra* Sam. and *Axillofebra* Sam. by having base of profemur narrowed and suboval in x-section instead of dilated and strongly flattened in x-section; from the latter genus also by having elytral puncturation seriate instead of predominantly irregular; from *Schenklingia* Cs. & Hktgr. by having mesosternum visible.

DISTRIBUTION. Specimens of the new genus have only been collected from sub-alpine grassland-Cyathea formations at 3400-3550 m on the Mt Wilhelm massif and Mt Michael in NE New Guinea. Each area supports a different species of *Setsaltica* on the same species of plant host, *Cyathea muelleri*, a treefern. At the Mt Wilhelm site, several species of *Cyathea* occur in fairly close proximity on the grasslands and forest edges immediately below Aunde Lake, but only the sampling from *C. muelleri* produced these alticines. On Mt Michael, an isolated mountain about 80 airline km from the preceding locality, one small patch of *C. muelleri* comprised the only species of treefern that I noted along the whole summit ridge grassland. These treeferns also supported a species of *Setsaltica*. Whether the association of *Setsaltica* spp. and *Cyathea muelleri* are coincident throughout the entire range of the latter and whether these alticines will also be found to be associated with other host species are unanswered questions. Yet, species of *Setsaltica* might be sought throughout the remainder of the known range of *Cyathea muelleri* which includes SE New Guinea: Mt Knutsford, Owen Stanley Range (type locality of *C. muelleri*) and NE New Guinea: Mt Aas, Kubor Range and the Salawaket Range on the Huon Peninsula.

KEY TO KNOWN SPECIES OF SETSALTICA

- Elytron largely orange-testaceous with dark margins basally, suturally, and sometimes laterally; aedeagus with apex not produced at convex extremity; spermatheca with gland valve (gv) on stalk (see figures); length 2.7-3.1 mm. Mt Wilhelm massif **cyathea***
- Elytron orange-testaceous with dark posthumeral, discal, and subscutellar \pm linear maculations; aedeagus with apex suddenly and convexly produced at extremity; spermatheca with gland valve sessile (see figures); length 2.65-3.2 mm. Mt Michael..... **eumolpiformis***

Setsaltica cyathea Samuelson, new species Fig. 1 a-c.

♂. (Holotype). Head piceous, labrum and antenna orange-testaceous; prothorax, basal and sutural margins of elytron castaneous, remainder of elytron orange-testaceous; venter and legs castaneous to orange-testaceous, metafemur darkest, tarsi palest.

Head barely exerted from prothorax, broadest near middle; labrum transverse, anterior margin slightly convex; frons shallowly impressed above; interantennal space concave, $0.6 \times$ as broad as transverse diameter of antennal socket; orbit $0.25 \times$ as broad as antennal socket; interocular space narrowest below, $0.55 \times$ as broad as depth of eye; gena $0.4 \times$ as deep as eye: eye large, narrow, lateral margin not attaining occipital area at side as viewed from front; postantennal swellings granulate, not exerted, broadly contiguous along dark median line and feebly delimited from vertex by faint transverse line; vertex granulate, surface evenly convex; supraorbital puncture small. *Antenna* $7/13$ as long as body; segment 1 elongate, thickened apically, 2 broadest near middle, 3-4 small and moderately broadened to apices, 5-6 becoming more robust, 7-

* Described as new.

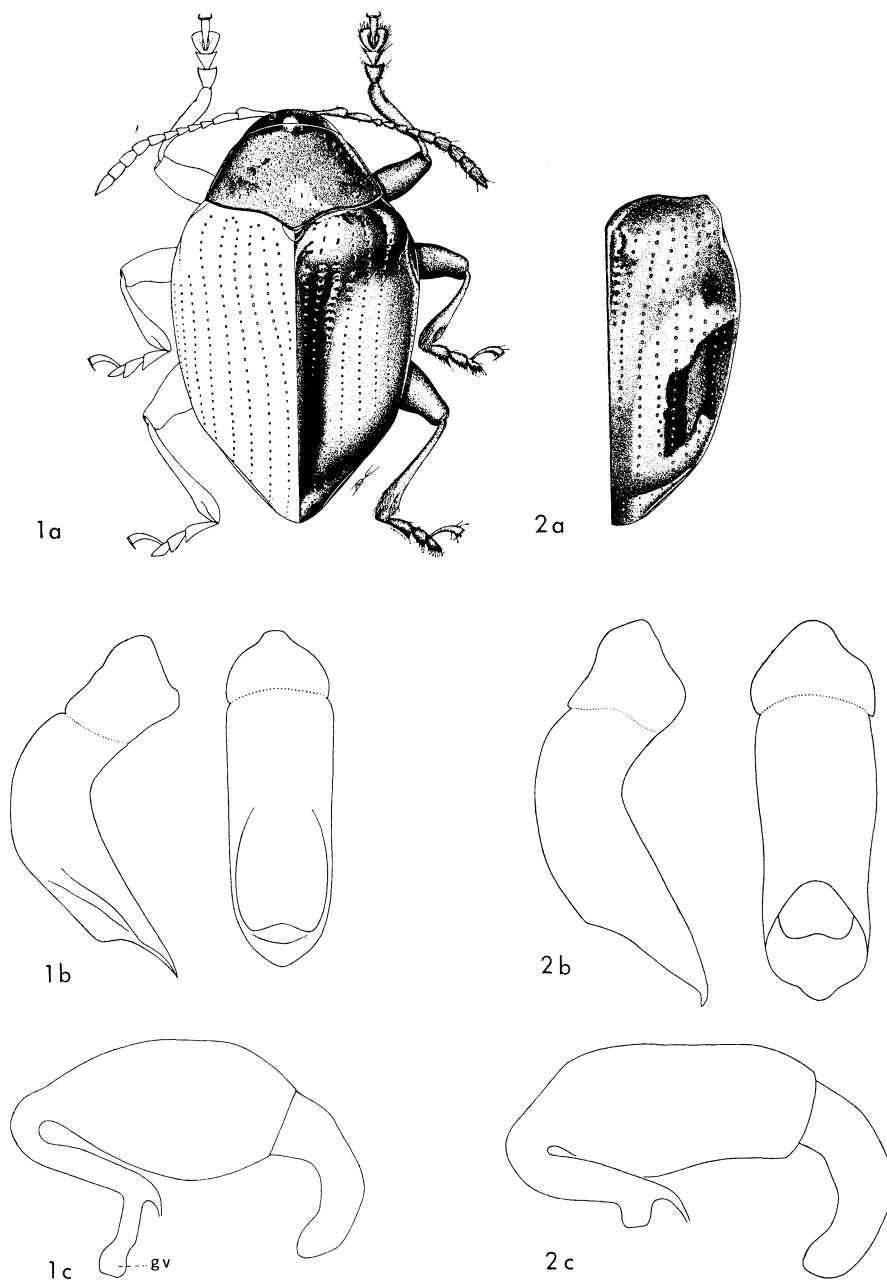


Fig. 1-2. 1, *Setsaltica cyatheae*, n. gen., n. sp.: a, dorsal view; b, aedeagus, lateral and dorsal views; c, spermatheca, lateral view (gv=gland valve). 2, *Setsaltica eumolpiformis*, n. gen., n. sp.: a, right elytron, dorsal view; b, aedeagus, lateral and dorsal views; c, spermatheca, lateral view.

10 robust, flattened, last with apex acute; relative lengths/breadths of segments are $21+ / 7+ : 12/6 : 7+ / 4 : 8/4+ : 8+ / 5+ : 9/6 : 10+ / 7+ ; 10/7+ : 10/8 : 10/9 : 18/8$. *Prothorax* $0.65 \times$ as long as broad, broadest at posterior angles; basal margin with median lobe broadly rounded; posterior angle not exerted; side straight; anterior angle small, subevenly rounded; discal punctures ovate, mostly $0.5-0.7 \times$ as large as interspaces, interspaces smooth, sparsely micropunctate. *Scutellum* triangular, sides weakly convex, apex acute, surface smooth. *Elytron* $2.8 \times$ as long as broad, broadest at basal 1/3; side \pm evenly and obliquely narrowed between basal 1/3 and apical 1/3, thence more strongly narrowed to obliquely rounded apical angle; epipleuron with surface oblique, not fully inflexed, gradually narrowed and continued to apex; humerus moderately and broadly produced; discal punctures mostly $0.35-0.5 \times$ as large as interstices and $0.7-1.5 \times$ as



Fig. 3. *Cyathea muelleri*, treefern host of *Setsal-tica cyatheae*, n. gen., n. sp., growing on subalpine grassland near forest edge below Aunde Lake at about 3500 m elevation.

large as transverse interspaces; punctures finer apically; interstices not swollen; sutural puncture row ending at basal 1/3. *Ventral surfaces* granulate; metasternum with large shallow punctures sublaterally; abdomen: sternum 1 with intercoxal piece broadly truncate, sternum 5 with apical margin broad, sinuate; relative lengths of sterna are $18+ : 7 : 6+ : 6 : 12$. *Legs*: metafemur $2.5 \times$ as long as broad, narrow basally, not strongly swollen, surface subgranulate and sparsely set with short pale hairs; relative lengths of metafemur, -tibia, -tarsus are $35 : 32 : 24$; basitarsus 1/3 as long as remainder. *Wing* fully developed. *Aedeagus* robust, strongly arched, $3.3 \times$ as long as broad; apex obliquely narrowed to rounded extremity. Length 2.9 mm; breadth 1.7.

♀. (Allotype). Chiefly differs from ♂ by having apical abdominal sternum more strongly narrowed apically, with apical margin truncate instead of sinuate; *spermatheca* as figured; length 3.1 mm; breadth 1.7.

Paratypes. Pronotum and darker markings of elytron dark castaneous to black with dull greenish lustre; specimens with darker pronotal color also tend to have lateral margin of elytron dark instead of orange-testaceous; length 2.7-3.1 mm; breadth 1.55-1.8.

Holotype ♂ (BISHOP 9453), NE New Guinea, E Highlands Distr., nr Aunde Lake between Keglsugl and Mt Wilhelm, 3400-3550 m, 14.VI.1967, foliage of *Cyathea muelleri*, Samuelson; allotopotype ♀ (BISHOP), same data as holotype; 32 paratopotypes, same data as preceding. Restricted type locality in reference to aerial photograph in Brass (1964: pl. 13): superimpose 10 mm circle over photograph with center of circle at intersection of 28 mm from upper margin of photograph and 62 mm from left margin. The host treeferns were very close to this intersection.

Differs from *S. eumolpiformis*, n. sp. by lacking dark and pale yellow maculations on elytral disc; by tendency for elytral discal punctures to be finer, $0.5 \times$ or less as large as interstices instead of $\pm 0.5 \times$ or more as large; aedeagus with apex evenly convex apically instead of suddenly produced at extremity.

Setsaltica eumolpiformis Samuelson, new species Fig. 2 a-c.

♂. (Holotype). Head and prothorax largely red-testaceous; elytron largely orange-testaceous with dark markings as figured; labrum and antenna orange-testaceous; venter and legs orange-to red-testaceous, thoracic sterna and femora darkest, tarsi palest.

Head barely exerted, broadest near middle; labrum transverse, anterior margin broadly convex; frons with surface broadly and shallowly concave; interantennal space concave, $0.7 \times$ as broad as antennal socket; orbit $0.15 \times$ as broad as antennal socket; interocular space narrowest below, $0.55 \times$ as broad as depth of eye; gena $0.4 \times$ as deep as eye; eye large, narrow, lateral margin not attaining occipital area at side as viewed from front; postantennal swellings granulate, feebly raised, oblique, contiguous at impressed dark median line; vertex granulate, surface evenly convex; supraorbital puncture small. *Antenna* $4/7$ as long as body; segment 1 elongate, 2 broadest near middle, 3-4 small and \pm strongly broadened to apices, 5-6 becoming more robust; 7-10 robust, last with apex acute; relative lengths/breadths of segments are $22/9 : 12/6 : 8/5 : 8/6 : 8/7 : 9/8 : 10/8+ : 11/9+ : 11/10+ : 10/10 : 16/10$. *Prothorax* $0.7 \times$ as long as broad, broadest at posterior angles; basal margin with median lobe broadly convex; posterior angle not exerted; side feebly convex; anterior angle small, obliquely rounded; discal punctures ovate, mostly $1-2 \times$ as large as interspaces; interspaces \pm smooth, sparsely micro-punctate. *Scutellum* triangular, sides barely convex, apex acute, surface \pm smooth. *Elytron* $2.75 \times$ as long as broad, broadest at basal $1/3$; side obliquely narrowed between basal $1/3$ and apical $1/3$, thence more strongly narrowed to rounded apical angle; epipleuron with surface oblique, not fully inflexed, gradually narrowed and continued to apex; humerus moderately produced; discal punctures mostly $0.7 \times$ as large as interstices and $0.7-1.5 \times$ as large as transverse interspaces; punctures finer apically; interstices not swollen; sutural puncture row ending near basal $1/3$. *Ventral surfaces* granulate; metasternum lacking large punctures sublaterally; abdomen: sternum 1 with intercoxal piece broadly truncate, sternum 5 with apical margin broad, sinuate; relative lengths of sterna are $22 : 7+ : 5+ : 5+ : 12$. *Legs*: metafemur $2.65 \times$ as long as broad, narrow basally, surface subgranulate; relative lengths of metafemur, -tibia, -tarsus are $40 : 34 : 24$; basitarsus $3/8$ as long as remainder. *Wing* fully developed. *Aedeagus* robust, strongly arched, $3.35 \times$ as long as broad, apex obliquely narrowed to slightly produced and rounded extremity. Length 2.75 mm; breadth 1.6.

♀. (Allotype). Chiefly differs from ♂ in having slightly paler ground color of dorsum; last abdominal sternum more strongly narrowed to truncate apical margin; *spermatheca* as figured; length 2.8 mm; breadth 1.65.

Paratypes. Ground color of dorsum ranging from orange-testaceous to dark red-fuscous; elytral maculation similar to preceding (7 paratypes) or with dark discal maculation entirely lacking (1 paratype) or with disc largely suffused with dark (1 paratype); central discal punctures of elytron commonly about $0.7 \times$ as large as interstices, but sometimes $\pm 0.5 \times$ as large (2 paratypes); length 2.65-3.2 mm; breadth 1.55-1.85.

Holotype ♂ (BISHOP 9454), NE New Guinea: E Highlands Distr., Mt Michael summit ridge, 3500 m, 19.VI.1967, on foliage of *Cyathea muelleri*, Samuelson; allotopotype ♀ (BISHOP), same data as holotype; 9 paratopotypes, same data as preceding. Restricted type locality: at preceding location on 3500 m saddle separating beacon summit from remainder of summit ridge prominences. This was only place on summit ridge where I noted the host treefern.

The species is closely related to *S. cyathea*, n. sp.; see key and discussion under the latter species for distinguishing characters.

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