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Two further new species of the genus *Dicraspeda* CHAUDOIR from New Guinea and the New Hebrides

(Coleoptera, Carabidae, Odacanthinae)

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Abstract

Dicraspeda minuta **sp. nov.** from Papua New Guinea and *D. hebridarum* **sp. nov.** from the New Hebrides are described, and an updated key to the Oriental - New Guinean species of the genus *Dicraspeda* CHAUDOIR, 1862 is presented.

Zusammenfassung

Dicraspeda minuta **sp. nov.** aus Papua New Guinea und *D. hebridarum* **sp. nov.** von den Neuen Hebriden werden beschrieben, und ein neuer Bestimmungsschlüssel für die Arten der Gattung *Dicraspeda* CHAUDOIR, 1862 aus der Orientalis und aus Neu Guinea ist beigefügt.

Introduction

While sorting out unidentified New Guinean Carabidae in the collection of the Natural History Museum, London (formerly British Museum, Natural History), two further new species of the Oriental-Australian genus *Dicraspeda* CHAUDOIR, 1862 were found, both arranged in the collection under der the name *Dicraspeda brunnea* CHAUDOIR, 1862. One of the new species is closely related to the widespread *D. brunnea*, the other is in some ways intermediate between the species of the *brunnea*-group (formerly genus *Dicraspeda* s. str.) and the species of the *bispinosa*-group (former genus *Philemonia* LIEBKE, 1932) mentioned in my recent papers about this genus (BAEHR 1996a, 1997).

Measurements

Measurements were made with a stereo microscope using an ocular micrometer. Length has been measured from apex of labrum to tip of elytra including spines. Hence, measurements may slightly differ from those of other authors, especially DARLINGTON (1968).

Updated key to the extra-Australian species of *Dicraspeda* CHAUDOIR

1 Apex of elytra not denticulate or spinose 2
– Apex of elytra denticulate or spinose 6
2 4th tarsomere of metatarsus emarginate for less than 1/3 of its length 3
– 4th tarsomere of metatarsus emarginate for more than 2/3 of its length ..... *longiloba* (LIEBKE, 1938)
3 Small species, length < 5.5 mm; lateral channel of pronotum narrower, not much explanate, surface rather convex; eyes rather depressed, laterally feebly protruded; elytral striae not impressed, finely punctate ..... *minuta* sp. nov.
– Larger species, length > 6.5 mm; lateral channel of pronotum wide, markedly explanate, surface rather depressed; eyes convex, laterally distinctly protruded; elytral striae at least basally impressed, coarsely punctate 4
4 Surface of elytra microreticulate, striae at least basally distinctly impressed, apex barely excised; aedeagus sinuate, apex not widened 5
– Surface of elytra not microreticulate, striae not impressed, apex distinctly excised; aedeagus not sinuate, apex widened ..... *obsoleta* BAEHR, 1996
5 Eyes larger, c. 1.5 x as long as orbits, laterally markedly protruded, orbits convex; lateral channel of pronotum distinctly punctate, disk with distinct transverse strioles; elytral striae impressed throughout; aedeagus rather short, with short, simply shaped apex ..... *brunnea* CHAUDOIR, 1862
– Eyes smaller, c. 1.2 x as long as orbits, laterally less protruded, orbits almost straight; lateral channel of pronotum impunctate, disk without distinct transverse strioles; elytral striae impressed only near base; aedeagus narrow and elongate, with elongate, slightly knobbed apex ..... *hebridarum* sp. nov.
6 Apex of elytra denticulate or spinose at sutural angle only 7
– Apex of elytra bispinose, with spines at sutural and lateral angles 13
7 Body size smaller, length usually <7.5 mm; 4th tarsomere of metatarsus emarginate for <1/2 of its length only; eyes large, slightly longer than orbits; sutural angle of elytra denticulate, lateral angle sharply angulate ..... *dubia* (GESTRO, 1879)
– Body size larger, length usually >8.0 mm; 4th tarsomere of metatarsus emarginate for almost 2/3 of its length; eyes smaller, shorter than orbits; sutural angle of elytra denticulate or spinose, lateral angle sharply or obtusely angulate 8
8 Eyes not protruded, lateral margin of head including eye evenly convex; aedeagus compact, large near apex, apex turned up, angle between lower surface of aedeagus and apex inconspicuous ..... *ullrichi* BAEHR, 1996
– Eyes protruded, lateral margin of head including eyes not evenly convex; aedeagus narrower near apex, apex not distinctly turned up, angle between lower surface of aedeagus and apex conspicuous or not, or aedeagus unknown 9
9 Sutural angle of elytra denticulate and lateral angle obtuse (Fig. 4); in ♀ base of elytra not microreticulate and elytra stout, ratio l/w c. 1.65 ..... *denticulata* BAEHR, 1997
– Sutural angle of elytra spinose or denticulate, but when denticulate, lateral angle sharply angulate; in ♀ base of elytra microreticulate or not, but when not microreticulate, elytra narrower and longer, ratio l/w c. 1.75 10

10 Elytra piceous, distinctly lighter than fore body 11
– Elytra black, not lighter than fore body 12
11 Sutural spines elongate; microreticulation of elytra in ♀ complete, in ♂ distinct at least in apical half, intervals barely convex; aedeagus wider at apex, lower surface markedly bisinuate, angle between lower surface and apex conspicuous, lateral surface rough. . ... *bispinosa* DARLINGTON, 1968
– Sutural spines shorter; microreticulation of elytra in ♀ visible only in apical half, in ♂ almost completely absent, intervals distinctly convex; aedeagus narrower at apex, lower surface evenly concave, angle between lower surface and apex barely indicated, lateral surface smooth ..... *loebli* BAEHR, 1996
12 Eyes larger, laterally more protruded (Fig. 2); pronotum slightly longer than wide; elytra narrower and longer, more parallel-sided, ratio l/w >1.75, in ♀ base not microreticulate ..... *intermedia* BAEHR, 1997
– Eyes smaller, laterally less protruded (Fig. 3); pronotum wider than long; elytra shorter and wider, posteriorly distinctly widened, ratio l/w <1.65, in ♀ base distinctly microreticulate ..... *laticollis* BAEHR, 1997
13 Colour black; tarsi sulcate-carinate above ..... *quadrispinosa* (CHAUDOIR, 1869)
– Colour green-purple; tarsi not sulcate-carinate above .... *violacea* (STURM, 1907)

Dicraspeda hebridarum sp. nov. (Figs 1, 3)

Holotype: ♂, New Hebrides: Aneityum. Red Crest. 1,200 ft. 3 m. N.E. of Anelgauhat. III.1955 / L.E. Cheesman. B.M.1955-217. (BMNH).

Diagnosis. Rather wide, depressed species of the *brunnea*-group with wide lateral channel of prothorax and unarmed apices of elytra, distinguished from the most closely related species *D. brunnea* CHAUDOIR, 1862 and *D. nitida* STURM, 1917 by: eyes less protruded, orbits almost straight, lateral channel of pronotum impunctate, disk of pronotum not striolate, proepisternum impunctate, and elytral striae only in basal half impressed.

Description. Measurements. Length: 6.7 mm. Ratios. Width/length of pronotum: 0.89; width of head/width of pronotum: 1.02; length/width of elytra: 1.58.

Colour. Upper and lower surfaces of head and pronotum uniformly deep black, elytra dark piceous-black, lateral channel indistinctly lighter, abdomen piceous. Labrum piceous, mandibles, palpi, antennae, and legs reddish-piceous.

Head. Large, triangular, slightly wider than pronotum, upper surface rather depressed. Eyes of moderate size, slightly longer than orbits, laterally markedly projecting, though not considerably interrupting the lateral curve of head. Orbits almost straight, in same line with eyes, forming a distinct angle with neck. Distance between eyes about twice as wide as diameter of eye. Clypeus separated by a fine suture that is shortly interrupted in middle, posterior part transversely convex. Labrum large, anteriorly straight, 6-setose. Mandibles and palpi of average size, mandibles anteriorly regularly incurved. Labium with elongate, triangular tooth. Frons laterally near clypeal suture with a deep, oblique impression that begins with a circular groove, in middle of frons with a large, horseshoe-shaped impression. Medially of eye with a strong ridge. Neck separated from vertex by a shallow, transverse furrow. Posterior supraorbital seta situated behind posterior margin of eye. Both antennae broken near base. Surface of head apart from labrum without microreticulation, impunctate and impilose, highly glossy.

Prothorax. Distinctly longer than wide, laterally rather convex, surface moderately depressed. Widest part about in middle, margin gently rounded, near basal angles shortly and gently concave. Lateral border prominent, raised throughout, lateral margin with a deep and rather wide channel that considerably narrows towards apex and base.

Proepipleura and proepisternum narrowly visible from above. Apex almost straight, unbordered, anterior angles rounded off, barely visible. Base very gently convex, unbordered, posterior angles right though obtuse at apex. Median line deeply impressed, not attaining base, anterior sulcus shallow, v-shaped, transverse basal sulcus barely impressed. Posterior marginal seta absent, anterior marginal pore present though both setae broken. Surface without microreticulation, impunctate, only anterior and posterior sulcus and basal third with scattered coarse punctures, lateral channel almost impunctate. Disk with some very weak transverse strioles, glossy.

Elytra. Large in comparison with fore body, more than twice as wide as prothorax, rather quadrate, though posteriorly slightly widened and lateral margin in anterior third faintly compressed. Surface depressed. Humeri wide, almost evenly rounded. Marginal channel moderately wide. Apex wide, oblique, laterally moderately concave. Lateral apical angle distinct though obtuse, sutural angle obtuse, apex with coarse border line. Striae only in basal half perceptibly impressed, there coarsely punctate, though towards apex striae not at all impressed and puncturation becoming very fine, intervals behind base feebly convex, then depressed. 3rd interval with four setiferous punctures, the anterior one situated at first third and close to 3rd stria, the median and apical ones adjacent to 2nd stria, the median puncture situated at posterior two fifth of elytra, both apical ones situated close together behind apical third of elytra. Marginal series of setiferous punctures consisting of 6 anterior pores behind shoulder, 7 apical pores in front of lateral apical angles, 1 large intercalar pore, and 2 pores near suture at apex. Surface with distinct though superficial, isodiametric microreticulation, impunctate and impilose, glossy. Wings fully developed.

Lower surface. Impunctate, smooth, even proepisternum and prosternum smooth. Metepisternum elongate, slightly > 2 x as long as wide. Terminal sternum in ♂ in middle slightly excised, with a pair of ambulatory setae.

Legs. Rather elongate. 5th tarsomer setose on lower surface. 4th tarsomer with shallow (<1/3 of length) excision. ♂ anterior tarsus biseriately squamose on 1st - 3rd tarsomeres.

♂ genitalia (Fig. 3). Genital ring narrow and elongate, slightly narrowed to the obtusely rounded apex that is slightly asymmetric. Aedeagus very slender and elongate, laterally slightly sinuate, lower surface slightly concave. Apex elongate, slightly turned to the right, distinctly knobbed and upturned.

♀ genitalia unknown.

Variation unknown.

Distribution. Aneityum, New Hebrides. Known only from type locality.

Collecting circumstances unknown. This is probably a ground-living, non-hygrophilous species.

Etymology. The name refers to the range of the species.

Relationships. This species is certainly most closely related to the widespread *brunnea* and also to the Australian *nitida*. Perhaps it purely represents the most easterly ranging offspring of *brunnea* from which it is mainly distinguished by the smaller eyes, slightly differently structured pronotum, less deeply striated elytra, and longer aedeagus with differently shaped apex.

Dicraspeda minuta sp. nov. (Figs 2, 4)

Holotype: ♀, Dobodura Papua, N.G. Mar-July, 1944 Darlington / Brit. Mus. 1975-567 / *Dicraspeda brunnea* Chd. det. Darl. '67 (BMNH).

Diagnosis. Small, fairly wide, moderately convex species with technical characters of the *brunnea*-group: e.g. distinct lateral channel of prothorax and unarmed apices of elytra. It is distinguished from the other species of the *brunnea*-group by smaller, far less

protruded eyes, more convex prothorax with narrower marginal channel and absolutely smooth disk, and comparatively convex elytra the striae of which are not at all impressed and finely punctate.

Description. Measurements. Length: 5.25 mm. Ratios. Width/length of pronotum: 0.87; width of head/width of pronotum: 1.03; length/width of elytra: 1.52.

Colour. Upper and lower surfaces of head and pronotum uniformly deep black, elytra piceous, lateral channel indistinctly lighter, epipleurae reddish. Abdomen anteriorly reddish, towards apex piceous. Labrum piceous, mandibles, palpi, antennae, and legs reddish-piceous, tarsi light reddish.

Head. Moderately large, fairly triangular, slightly wider than pronotum, upper surface rather depressed. Eyes of comparatively small size, only slightly longer than orbits, laterally barely projecting, not interrupting the lateral curve of head. Orbits elongate, slightly convex, in same line with eyes, forming a distinct angle with neck. Distance between eyes > 2.5 x as wide as diameter of eye. Clypeus separated by a fine suture that is shortly interrupted in middle, surface even. Labrum large, anteriorly straight, 6-setose. Mandibles and palpi of average size, mandibles anteriorly regularly incurved. Labium with rather wide, triangular tooth. Frons laterally near clypeal suture with a deep, sinuate impression directed towards the eye and prolonged almost to posterior margin of eye, frons in middle with a v-shaped impression. Medially of eye with a strong ridge. Neck separated from vertex by a shallow, transverse furrow. Posterior supraorbital seta situated far behind posterior margin of eye. Antennae rather short, just attaining humeri, median antennomeres c. 1.6 x as long as wide . Surface of head apart from labrum without microreticulation, impunctate and impilose, highly glossy.

Prothorax. Distinctly longer than wide, laterally moderately convex, disk fairly convex. Widest part in front of middle, lateral border line gently rounded, near basal angles very feebly concave. Lateral border prominent, raised throughout, lateral margin with a well separated and deep, though fairly narrow channel. Proepipleura and proepisternum narrowly visible from above. Apex almost straight, unbordered, anterior angles rounded off, barely visible. Base very gently convex, unbordered, posterior angles right though obtuse. Median line very deeply impressed, not attaining apex nor base, anterior sulcus shallow, v-shaped, transverse basal sulcus barely impressed. Posterior marginal seta absent, anterior marginal seta present, situated in front of middle. Surface without microreticulation, impunctate, anterior and posterior sulcus, basal third, and lateral channel with very coarse punctures. Disk only with faintest indications of transverse strioles, highly glossy.

Elytra. Rather large in comparison with fore body, slightly less than twice as wide as prothorax, rather quadrate, though posteriorly slightly widened and lateral margin in anterior third faintly compressed. Surface moderately convex. Humeri wide, almost evenly rounded. Marginal channel rather narrow. Apex wide, oblique, laterally moderately concave. Lateral apical angle distinct though obtuse, sutural angle obtuse, apex with coarse border line. Striae not at all impressed, puncturation fine, becoming even finer towards apex, intervals depressed throughout. 3rd interval with four setiferous punctures, the anterior one situated at first quarter and close to 3rd stria, the median and apical ones adjacent to 2nd stria, the median puncture situated slightly behind middle, both apical ones situated close together at apical quarter of elytra, all punctures very fine. Marginal series of setiferous punctures consisting of 6 anterior pores behind shoulder, 7 apical pores in front of lateral apical angle, 1 intercalar pore, and 2 pores near suture at apex. Surface with distinct though superficial, isodiametric microreticulation, impunctate and impilose, glossy. Wings fully developed.

Lower surface. Proepisternum, prosternum, and mesepisternum very coarsely punctate, abdomen impunctate, smooth, though microreticulate. Metepisternum elongate, c. 2.5 x as

long as wide. Terminal sternum in ♀ in middle barely excised, with two pairs of ambulatory setae.

Legs. Moderately elongate. 5th tarsomer setose on lower surface. 4th tarsomer with rather shallow (c. 1/3 of length) excision. Vestiture of ♂ anterior tarsus unknown.

♂ genitalia. Unknown

♀ genitalia (Fig. 4). Stylomere 2 rather elongate, slightly curved, with acute apex; with 2 stout ventral ensiform setae, a rather large dorsal ensiform seta, and a short nematiform seta raising from a groove in apical third. Base of stylomere 1 with c. 8 stout ensiform setae.

Variation. Unknown

Distribution. Dobodura, eastern part of Papua New Guinea. Known only from type locality.

Collecting circumstances. Unknown. This is probably a ground-living, non-hygrophilous species.

Etymology. The name refers to the very small size of the species.

Relationships. Apparently this species takes a somewhat intermediate position between the *brunnea*-group (former subgenus *Dicraspeda* s. str.) and the *bispinosa*-group (former genus or sub genus *Philemonia* LIEBKE, 1932), because it combines the unarmed elytral apex and non-bilobate 4th tarsomere of the *brunnea*-group with the narrowly channelled prothorax and the more convex body shape of the *bispinosa*-group. It is, therefore, evidence for the rather weak subgeneric concept within the genus *Dicraspeda* mentioned before (BAEHR 1996a, 1997). Thus, *D. minuta* takes a rather isolated position within the genus, and probably, the most closely related species might be *D. dubia* (GESTRO, 1879).

Remarks

The genus *Dicraspeda* sensu latu is widely distributed throughout the Oriental and Australian Regions, though it seems that it reaches its highest species density and morphological diversity in the Papuan Subregion, where also the most highly evolved species exist. Some apparent reasons for this distribution pattern have been discussed recently (BAEHR 1997).

Most species of *Dicraspeda* possess rather restricted ranges, with the single exception of the very widespread species *D. brunnea* that has been thus far recorded from all Greater Sunda Islands, Lombok in the Lesser Sunda Islands, some Philippine islands, Celebes (Sulawesi), Timor, New Guinea, New Britain, and northeastern Australia. In contrast to this extensive range, the other species of the *brunnea*-group (*D. obsoleta* BAEHR, 1996 in New Guinea, *D. nitida* SLOANE, 1917 in northern Australia, and *D. hebridarum* sp. nov. in the New Hebrides) apparently have rather restricted ranges, and they all occur at the eastern or southeastern fringes of the range of *brunnea*. It is, then, obvious that these species might be offshoots of the widespread *brunnea* that have evolved by speciation at the margins of the original stock, either by vicariance or dispersal. This opinion should be corroborated by phylogenetic evidence which is not yet possible. However, at least some character states of *brunnea* seem to be plesiomorphic compared with the states occurring in the other species of the *brunnea*-group. These presumably plesiomorphic states are:

- striation of the elytra complete and deep,
- puncturation of elytral striae coarse and rather similar,
- microreticulation of the surface of elytra coarse and distinct,
- apical margin of elytra barely excised,
- pronotum narrow, rather elongate,
- puncturation of pronotum coarse and rather extended,

- eyes large, laterally markedly protruded, with rather small orbits,
- apex of aedeagus simple.

The three other mentioned species of *Dicraspeda* s. str. differ in most of these respects from *D. brunnea*. However, this does not implicitly mean that they are more closely related one to another than either to *brunnea* and that they together form the adelphotaxon of *brunnea*. It could be possible, instead, that there are common underlying trends that partly become manifest in one or another species.

Most interesting in this context is the status of *D. minuta* that actually takes an intermediate position between the species of the *brunnea*-group and those of the *bispinosa*-group. In most of the character states mentioned above this species also deviates from *brunnea*.

The main characters common with the species of *Dicraspeda* s. str. are:

- apex of elytra unarmed,
- 4th tarsomere not bilobate.

The main characters common with the *bispinosa*-group (formerly genus *Philemonia*) are:

- pronotum narrowly channelled laterally,
- body shape rather convex,
- eyes laterally far less protruded.

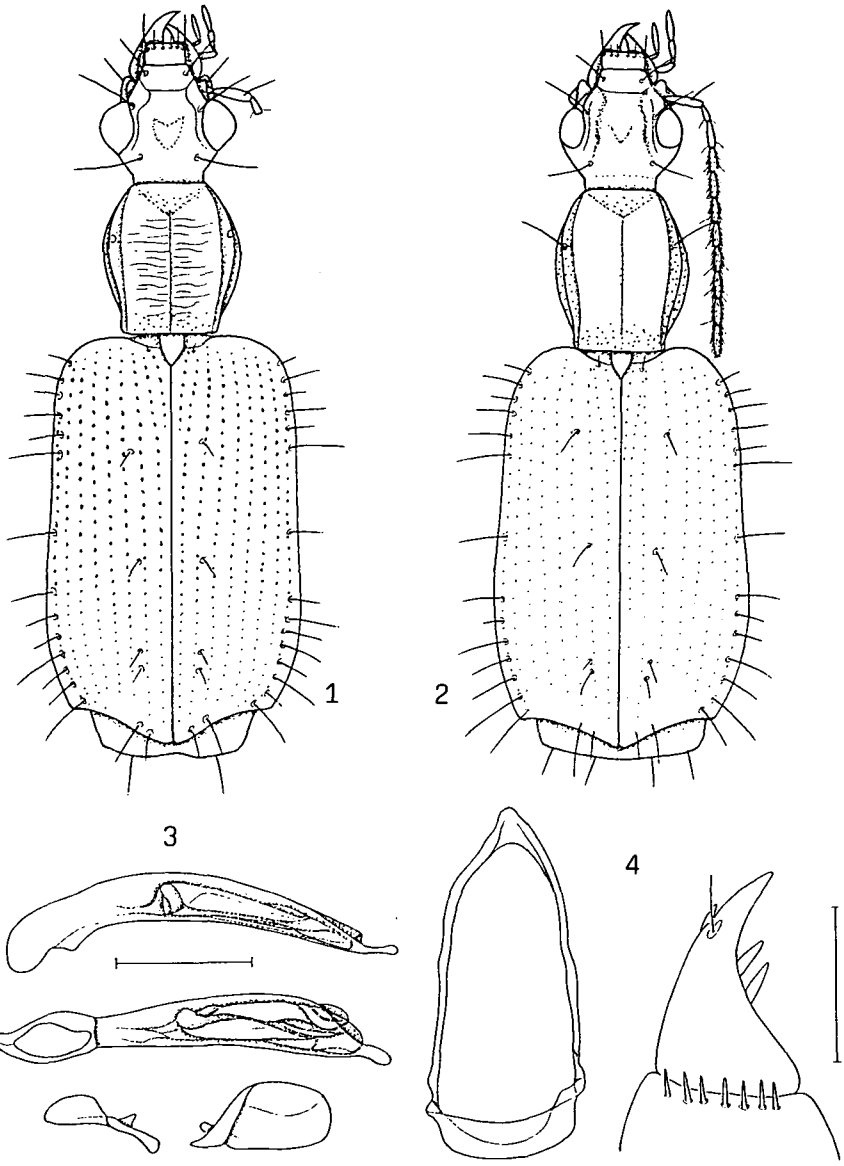
This intermediate position illustrates that the subgeneric, or even generic, concept within the genus *Dicraspeda*, or, in the second case, of the genus and its closest relatives, is rather weak. It may be most advisable, at the present state of knowledge at least, to include all species into the genus *Dicraspeda* and to subdivide this genus at most in species groups as proposed recently (BAEHR 1996a, 1997).

It is not unexpected that such intermediate species should occur in New Guinea, where apparently the main taxonomic diversification within the genus took place and where at least the *bispinosa*- and *quadrispinosa*-groups had their origin. Although the origin of the genus as a whole is still uncertain, because it could have evolved as well anywhere in the Oriental Region as in the Papuan-Australian region, the evolved *bispinosa*- and *quadrispinosa*-groups are certainly of Papuan origin. This might be strong evidence of a southern, Gondwanan origin of the genus, much alike several of the more primitive Australian genera of Odacanthinae (BAEHR 1986, 1996b). However, the recent distribution of the widespread species *D. brunnea* which is the single species to occur in the Oriental region proper, could be interpreted as of southern (Gondwanan) origin, too, because in the Oriental Region *brunnea* is known only from the insular belt including the Greater and Lesser Sunda Islands, the Philippines, and the Moluccas which all were part of the former so-called "Sundaland" that was composed of certain terranes of clearly Gondwanan origin.

So it seems that the whole genus had a southern (Gondwanan) origin, no difference whether it actually originated in New Guinea (present Papuan Subregion) or in the former "Sundaland" (present southern Oriental Region). However, the occurrence of the less evolved genus *Eudalia* CASTELNAU, 1867 in Australia (several species) and perhaps also in New Guinea (the somewhat aberrant *E. anomala* DARLINGTON, 1968 with uncertain affinities) wich apparently forms the adelphotaxon of *Dicraspeda* would corroborate the origin of *Dicraspeda* in the Papuan Subregion.

Acknowledgements

My sincere thanks are due to Mr. S. HINE (London) for the kind loan of the specimens.



Figs 1, 2. Habitus. 1. *Dicraspeda hebridarum* sp. nov.; 2. *D. minuta* sp. nov. Lengths: 6.7 mm; 5.25 mm.
Fig. 3. *Dicraspeda hebridarum* sp. nov. ♂ genitalia: genital ring, left side and lower surface of aedeagus, parameres. Scale: 0.5 mm.
Fig. 4. *Dicraspeda minuta* sp. nov. ♀ stylomeres 1 and 2. Scale: 0.1 mm.

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Literaturbesprechung

BECK, H. (Hrsg.) 1997: Alexander von Humboldt. Die Forschungsreise in den Tropen Amerikas. - Wissenschaftliche Buchgesellschaft, Darmstadt. 3 Teilbände mit 441, 371 und 494 S.

Die Herausgabe der Werke Alexander von HUMBOLDTs ist ein großer Verdienst der Wissenschaftlichen Buchgesellschaft, und im vorliegenden Falle der „Reise in den Tropen Amerikas", des Bonner „Geographie-Historikers" Hanno BECK. Die Zusammenstellung einer deutschen Ausgabe war nicht ganz einfach, liegen doch über 30 Originalbände vor, die alle Berichte zur Amerika-Reise HUMBOLDTs enthalten, und deren „Chronologie" nicht immer einfach nachzuvollziehen war. Vor allem der Vergleich des französischen Originals mit der einzigen vollständigen deutschen Übersetzung ergab die Textgrundlage, welche dem deutschsprachigen Leser erstmals seit 1832 die zusammenhängende Lektüre aller 29 Kapitel des eigentlichen Reiseberichtes in gereinigter Übersetzung erlaubt. Von den großen Schwierigkeiten zeugt der „Kommentar" am Ende des dritten Teilbandes.

HUMBOLDTs Forschungsreise (1799-1804) ist als Lehrstück damals modernster aufklärerischer Physikalischer Geographie zu sehen. Es reicht von der Morphographie über die frühe, großartige Anwendung damals noch unklar definierter, aber doch schon wegweisender Methoden der Bevölkerungs-, Wirtschafts- und Sozialgeographie bis hin zur eindeutigen Verteidigung der Menschenrechte.

Diese drei Teilbände stellen mit Sicherheit ein Lesegenuß der Extraklasse dar, wird doch einem „breiten" Publikum der Zugang zu HUMBOLDTs Originalschriften ermöglicht. Einziger Wermuthstropfen ist die „sparsame" Illustration des Werkes: Keinerlei Karten oder Stiche sind in dem gesamten Werk zu finden - hier hätte man sich vielleicht doch eine etwas bibliophilere Ausgabe gewünscht. Roland GERSTMEIER

WETTENGL, K. (Hrsg.) 1997: Maria Sibylaa Merian. Künstlerin und Naturforscherin 1647-1717. - Historisches Museum Frankfurt am Main, Verlag Gerd Hatje, Ostfildern. 275 S.

Dieser Ausstellungskatalog (die Ausstellung über M.S. MERIAN ist bis zum 1. März 1998 im Historischen Museum Frankfurt zu sehen) ist nach den grundlegenden Arbeiten von Elisabeth RÜCKER die erste zusammenfassende Monographie zum Werk der Künstlerin. Es wird nicht nur das künstlerische und naturwissenschaftliche Schaffen vorgelegt, sondern auch ihre Stellung als Verlegerin und Unternehmerin dargestellt. MERIAN führte für die damalige Zeit als Frau ein sehr selbstbewußtes und ungewöhnliches Leben, das seine Krönung wohl in der berühmten Reise nach Surinam fand. Bereits mit 13 Jahren beobachtete und studierte sie das Leben und die Entwicklung der Insekten. Bereits 1679 erschien der erste Teil ihres bekannten Werkes „Der Raupen wunderbare Verwandelung...". Neben Blumen- und Fruchtstilleben malte sie farbenprächtige Aquarelle, auf denen sie detailliert die Metamorphose der Schmetterlinge im Zusammenleben mit ihren Wirtspflanzen schilderte. Ihre Aquarelle und handkolorierten Kupferstiche spiegeln sowohl eine künstlerische Fülle als auch eine naturwissenschaftliche Exaktheit wider, die ihresgleichen zu suchen hat.

Die Struktur des Kataloges entspricht der Gliederung der Ausstellung nach den verschiedenen Aufenthaltsorten der Künstlerin; ihr bedeutendes Werk wird somit unter biographischen, historischen und künstlerischen Aspekten betrachtet. Neben den einführenden Texten zu den einzelnen Kapiteln werden alle Exponate großteils farbig abgebildet und genauestens erläutert. Recht bemerkenswert ist der letzte Beitrag von Elisabeth RÜCKER, in dem M.S. MERIAN auch als Unternehmerin und Verlegerin analysiert wird. Ebenso werden 18 Briefe der Künstlerin veröffentlicht; eine ausführliche Bibliographie zur gesamten Thematik beschließt diesen Band.

Eine wahrlich einmalige bibliophile Monographie, die weit über „sonstige" Katalogwerke hinausgeht, und sowohl Künstler als auch Naturwissenschaftler begeistern wird.
Roland GERSTMEIER

FLINDT, R. 1995: Biologie in Zahlen. Eine Datensammlung in Tabellen mit über 10.000 Einzelwerten. - Gustav Fischer Verlag, Stuttgart. 4. Aufl., 283 S.

Welcher Biologe hat nicht schon mal nach „Superlativen" gesucht, wie z.B. welches ist das größte Insekt, das schwerste Säugetier, das maximale Alter verschiedener Pflanzen, die Inkubationszeit wichtiger Infektionskrankheiten oder vielleicht auch die Hirngewichte einiger bedeutender Menschen. Meist fängt man dann in einschlägigen Standardwerken zu suchen an und ist nach kurzer Zeit enttäuscht, weil die Suche einigermaßen frustrierend und zeitraubend verläuft. Mit diesem Nachschlagewerk hat man es da sehr viel einfacher: Hier finden sich vergleichende Tabellen mit Daten aus Zoologie, Botanik, Mikrobiologie und Humanbiologie. Da dieses Buch in erster Linie für Laien und Lehrer konzipiert ist, sind die Daten entsprechend unterrichtsbezogen zusammengestellt. Wer trotzdem nicht weiterkommen sollte, dem hilft ein ausführliches Sach- und Namensregister. Die dem Werk zugrundeliegende Literatur ist ebenfalls aufgelistet.

Eine originelle Datensammlung, die hoffentlich noch in vielen Neuauflagen weitergeführt wird.
Roland GERSTMEIER

STORCH, V. & WELSCH, U. 1997: Systematische Zoologie. - Gustav Fischer Verlag, Suttgart. 5. Aufl., 804 S.

Während in der 4. Auflage dieses erfolgreichen Standardwerkes verstärkt ökologische Aspekte und praktische Gesichtspunkte (Schädlingskunde, Aquakultur, Nutzung von Tieren für die Ernährung des Menschen u.a.) aufgenommen wurden, zeichnet sich die vorliegende 5. Auflage durch ihren speziellen Bezug zum Menschen aus. So werden Parasiten des Menschen, wichtige Schadorganismen in Land- und Forstwirtschaft, synanthrope Tiere, Neozoen oder aber auch vom Menschen intensiv genutzte und kulturell bedeutsame Tiere in besonderen (grau hinterlegten) Kästchen hervorgehoben. Der Leser kann diese Artenkästchen überschlagen, wenn er sich nur ganz allgemein über eine Tiergruppe informieren will; er kann sich aber auch von Kasten zu Kasten „hangeln", um möglichst schnell den Zugang zu den für den Menschen bedeutsamen Arten zu finden. Weiter ausgebaut wurden die in der 4. Auflage konzipierten Lebensraum-Darstellungen; sie weisen verstärkt auf die ökologischen Aspekte der systematischen Zoologie hin. Insgesamt werden somit auf 13 „Tafeln" etwa 200 Tierarten in ihrem Lebensraum dargestellt. Die Grundkonzeption besteht nach wie vor in einem Überblick über das gesamte Tierreich, wobei der Schwerpunkt auf Morphologie und Entwicklungsgeschichte liegt. Trotz einer Umfangssteigerung von 73 Seiten bleibt dieses Standardwerk ein kompaktes Lehrbuch und Nachschlagewerk Erfreulich - auch wenn sehr kompakt - ist das einführende Kapitel über die „Grundlagen der Systematik"; hier würde man sich vielleicht doch etwas mehr Ausführlichkeit bezüglich der phylogenetischen Systematik und der evolutionären Klassifikation wünschen. Außerdem wäre es in einer nächsten Auflage an der Zeit, dem Leser nicht die Bedeutsamkeit molekularbiologischer Untersuchungen zu unterschlagen.
Roland GERSTMEIER

DIESFELD, H.J. & KRAUSE, G. 1997: Praktische Tropen- und Reisemedizin. - Georg Thieme Verlag, Stuttgart. 205 S.

Leider wird entgegen einer steigenden Beliebtheit bei Tropenreisen das gesundheitliche Risiko einer solchen recht häufig unterschätzt. Vieles kann schon bei der Vorbereitung einer Reise getan werden, um das Gesundheitsrisiko zu vermindern. Auch entsprechende Prophylaxe vor Ort ist einer gesunden Rückkehr ins Heimatland förderlich. Allerdings

sollte eine vernünftige Vorbereitung nicht auf die „last-minute" hinausgeschoben werden. Um diesem Informationsbedarf gerecht zu werden gibt dieses Büchlein Empfehlungen zur Beratung, Diagnose und Therapie von Tropenkrankheiten. In drei Abschnitte (Fragen die vor Ausreise in die Tropen geklärt werden sollten - Diagnose und Therapie einzelner Tropenkrankheiten - Problematik nach der Rückkehr aus den Tropen) gegliedert, werden alle Aspekte zur Tropentauglichkeit, Steckbriefe der 50 häufigsten Erkrankungen, Therapieschemata, Diagnosen und viele nützliche Zusatzinformationen behandelt. Lobenswert ist auch das beiliegende Informationsblatt (zur Vervielfältigung freigegeben!), das in Kürze über die wichtigsten Gesundheitsrisiken informiert und Empfehlungen für die Zusammenstellung einer Reiseapotheke gibt.

Eine lobenswerte, kompakte Darstellung dieser komplexen Thematik, die bei keinem mehrwöchigem Tropenaufenthalt im Reisegepäck fehlen sollte. Roland GERSTMEIER

KNIPPERS, R. 1997: Molekulare Genetik. - Georg Thieme Verlag, Stuttgart. 7. Aufl., 508 S.

Der „Knippers" ist das ideale Buch zum Studium der Genetik: Kompakt, klar strukturiert, informativ und bunt. Gegliedert ist es in vier Teile: Grundlagen (Proteine; DNA; Transkription, Tanslation und der genetische Code; *E. coli* als genetisches System; DNA im Zellkern), Allgemeine genetische Prozesse (DNA-Replikation; Rekombination und Transposition; Mutationen), Gene und Genome (Wie man Gene untersucht; Struktur eukaryotischer Gene; RNA-Polymerasen und Grundlagen der Transkription; Regulation proteinkodierender Gene; Spleißen und Prozessieren; mRNA im Cytoplasma) und Genetische Systeme (Gene des Menschen; Gene in Mitochondrien und Chloroplasten). Ein Anliegen des Autors ist es dabei, zuerst über die Hintergründe einer Forschungsrichtung zu informieren und dann schnell bis an das aktuelle Geschehen heranzugehen; so wird etwas von der Aufregung vermittelt, die die molekulare Genetik heute so spannend macht. Die ausgewählte Themenbreite ist auf die Bedürfnisse der Studenten abgestimmt und zeichnet sich somit durch eine logische und didaktisch sinnvolle Reihenfolge aus.

Ein „highlight" unter den Lehrbüchern der molekularen Genetik. R. GERSTMEIER

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