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On a collection of ground beetles from Gambia (Insecta, Coleoptera, Carabidae)

Martin BAEHR

Abstract

Based on recent collections an annotated list of 161 species of Carabidae from Gambia is provided. Some information about distribution of the species is added. The great majority of the species are recorded for the first time explicitly from the state of Gambia. *Lymnastis schachti* sp. nov. is described as new and is compared with the North and West African eyed and winged species of the genus *Lymnastis* MOTSCHULSKY. Additional important records are: *Geodromus dumolinii* DEJEAN, 1829, that was described from Senegal, but apparently was never recaptured in West Africa since description; *Scarites edentatus* BÄNNINGER, 1932 and *Styphlomerus piccolo* LIEBKE, 1927 which both were hitherto known only from East Africa; *Cymbionotum rufotestaceum* (FAIRMAIRE, 1893), *Elaphropus nigrifolius* BURGEON, 1935, *Tachys testaceus* (BASILEWSKY, 1953), *Abacetes brunneus* STRANEO, 1939, and *Melanchiton parallelus* (CHAUDOIR, 1883) which all were not yet found as far north.

Zusammenfassung

Kürzlich durchgeführte Aufsammlungen von Insekten in Gambia ergaben eine Summe von 161 Arten von Laufkäfern (Carabidae), die mit kurzen zoogeographischen Angaben aufgelistet werden. Die Mehrzahl der Arten wird erstmals explizit für Gambia genannt. *Lymnastis schachti* sp. nov. wird beschrieben und mit den sehfähigen, geflügelten nord- und westafrikanischen Arten der Gattung *Lymnastis* MOTSCHULSKY verglichen. Folgende weitere Meldungen sind von besonderem Interesse: *Geodromus dumolinii* DEJEAN, 1829; eine Art, die zwar von Senegal beschrieben worden ist, anscheinend seither aber niemals wieder in Westafrika gefunden wurde; *Scarites edentatus* BÄNNINGER, 1932 und *Styphlo-*

merus piccolo LIEBKE, 1927, die beide bisher nur aus Ostafrika bekannt waren; *Cymbionotum rufotestaceum* (FAIRMAIRE, 1893), *Elaphropus nigrifolius* BURGEON, 1935, *Tachys testaceus* (BASILEWSKY, 1953), *Abacetus brunneus* STRANEO, 1939 und *Melanchiton parallelus* (CHAUDOIR, 1883), die alle bisher noch nicht von so weit nördlich gemeldet wurden.

Introduction

The small western African country of Gambia has not been so far received much attention from insect collectors and scientists, at least as the beetles of the large family Carabidae are concerned. In most of the previous major works on African Carabidae (e.g. BASILEWSKY 1950a-1951) ground beetles from this country have been included under the general locality "Senegambia", commonly without specification from which part of this area they came. Therefore, although many carabids were recorded from "Senegambia" or even from Senegal proper, specified records from Gambia are poor and one has to read exactly the locality names to recognize actual records from Gambia.

Recently, a couple of collections in Gambia were carried out by several colleagues and friends, some results of which have been already published (SCHACHT 2000, 2002; WIESNER 2001; GRIMM 2002). The samples gathered during these trips compelled me to present a list of those carabid beetles that have been captured recently in Gambia proper. Certainly, this list does not reflect the complete species inventory, but it may encourage further collecting and scientific work on the fauna, even when most species recorded from Gambia probably possess much wider ranges in Senegal and additional adjacent countries.

The material is stored partly in Zoologische Staatssammlung, München (ZSM), partly in the working collection of the author which likewise will be stored in ZSM. The bulk of the material has been sampled by Mr. W. SCHACHT (ZSM, München) and Dr. R. GRIMM (Tübingen) in the course of several collecting trips carried out in the period of 1998-2000. Additional material was contributed by the following collectors: Prof. Dr. H.-J. BREMER (Wellingholzhausen), Dr. K.-M. CHEN (Taipei), Dr. K.H. HANDKE (Delmenhorst), Mr. D. JUNGWIRTH (Ingolstadt), and Dr. H. TERLUTTER (Münster).

The Paussini were kindly identified by Prof. Dr. P. NAGEL (Basel), and the majority of Cicindelinae by Mr. J. WIESNER (Wolfsburg). I am much indebted to both colleges for their friendly assistance. Through the kind permission of Dr. M. DE MEYER (Tervuren), I was able to compare a number of species with material stored in the Museum voor Midden Africa, Tervuren, that was identified by either P. BASILEWSKY or S.L. STRANEO.

In spite of the enormous and inestimable work of P. BASILEWSKY on a multitude of carabid groups, and of S. L. STRANEO, mainly on Pterostichini, identification of African Carabidae still is a difficult matter, because no general treatment is available and even general revisional papers of subfamilies or tribes are scarce and/or outdated. So, identification by use of keys is only possible for very few of the larger groups, e.g. harpalines (BASILEWSKY 1950a-1951) or some other genera or supra-generic units (e.g. ALLUAUD 1931; BÄNNINGER 1937-1939; BASILEWSKY 1948, 1960, 1961b, 1962c, 1963, 1986; BRUNEAU DE MIRÉ 1963, 1964; JEANNEL 1932; KULT 1954, 1959; LECORDIER 1988; LECORDIER & GIRARD 1990; LIEBKE 1931, 1934, 1937; STRANEO 1940, 1950, 1955), but even some of these comprehensive papers are rather old and therefore more or less outdated. In general, therefore, one has to deal with a multitude of fragmentary revisions

or rather descriptions of single species. Unfortunately, in particular revisions or keys that lead to genera are especially scarce, so that, strange enough, identification of genera sometimes is more difficult than determination of species.

The easiest way to identify African Carabidae, therefore, is comparison with authentic material identified by BASILEWSKY, STRANEO or other authorities on African Carabidae. This is best done in the extremely rich and well sorted collections of African Carabidae in the Museum voor Midden Africa, Tervuren, Belgium. But even in doing this, I missed to find a few species in this enormous collection. As a consequence, the following list of species includes a few species that were not or not exactly identified.

In the species list nomenclature in general follows the most recent catalogue of LORENZ (1998). In few cases only, my decisions about generic vs. subgeneric, or species vs. subspecies level, deviate from that catalogue. In general, I did not mention subgenera, and within genera the species are arranged in alphabetical order, as are the genera within the tribes. I know that this does not reflect relationships, but for a species list easy detection seems more important than relationship.

In the subtribe Tachyina, however, the situation is different and rather complex. LORENZ (1998) had adapted the taxonomic decisions of ERWIN (1974) who included all those species that were previously arranged in the genera or subgenera *Tachyura* MOTSCHULSKY, *Barytachys* CHAUDOIR, and *Tachyphanes* JEANNEL, in the genus *Elaphropus* MOTSCHULSKY which genus name was previously used only for the small species related to *Elaphropus globulus* (DEJEAN). However, in a critical examination of the generic and subgeneric systematics of the former genus *Tachys* (sensu latissimo) R. SCIACKY (Milano) & A. VIGNA TAGLIANTI (Roma) demonstrate that ERWIN's decision with high probability is not justified. Unfortunately, their paper has not yet been printed, so, although I have read it and agree with most of both authors' opinions, I neither want to repeat ERWIN's apparently incorrect ranking, nor I want to use decisions made in a paper in manuscript prior to its print. For these reasons, I use the provisional generic names *Tachyura* MOTSCHULSKY for those species that were arranged under *Elaphropus* by ERWIN (1974) and LORENZ (1998), except for the species of *Elaphropus* in the former restricted sense, and *Tachys* DEJEAN for those species included by LORENZ in the subgenera *Tachys* s. str. and *Paratachys* CASEY.

The zoogeographic annotations mainly refer to the following revisions and faunistic papers: ALLUAUD 1931; BÄNNINGER 1937-1939; BASILEWSKY 1948, 1950a-1951, 1950b, 1953a, 1960, 1961a, 1961b, 1963, 1964, 1965, 1968, 1969, 1970, 1977, 1986; BRUNEAU DE MIRÉ 1952, 1963, 1964, 1990; KULT 1954, 1959; LECORDIER 1988; LECORDIER & GIRARD 1990; LIEBKE 1934; MATEU 1963, 1966; STRANEO 1939, 1950, 1952, 1954a, 1956a, 1956b, 1956c, 1963b, which comprise several records on collections made in various West African countries or areas in the neighbourhood of Gambia. Additional information was gathered from CSIKI (1927-1933) and from the exhaustive papers of BASILEWSKY (1953b, 1962a, 1962b) and STRANEO (1954b, 1960, 1963a) on the fauna of certain national parks in Central and East Africa.

Measurements

Measurements were taken using a stereo microscope with an ocular micrometer at 64x magnification. Length has been measured from apex of labrum to apex of elytra. Lengths,

therefore, may slightly differ from those taken by other authors. Length of pronotum was measured along midline, width of pronotum at widest part. Width of apex of pronotum was measured between the most advanced parts of the apical angles, width of base at the position of the insertion of the posterior lateral seta. According to experience such ratios are somewhat variable in most species, but generally offer rather good measures of relative shape.

List of species

Cicindelinae

Cicindela aulica aulica DEJEAN, 1831: Kiang West NP, Tubab Kollon Pt., 6.11.1998; Bakau, 21.7.1998; W. SCHACHT. Tendaba, 17.2.2000, R. GRIMM. Tendaba Camp, 10. 2002, K. HANDKE. - Distribution: Widely distributed from southern Europe (Greece), the Near East to Pakistan, to Central Africa. According to WIESNER (2001) new for Gambia.

Cicindela cincta OLIVIER, 1790: Abuko NP, 15.7.1998, W. SCHACHT. - Distribution: Widely distributed in northern sub-Saharan and Central Africa. First record from Gambia by WERNER (1996).

Cicindela melancholica melancholica (FABRICIUS, 1798): Bakau, 12.-25.10.1999, W. SCHACHT. - Distribution: Although this species has an extremely wide range throughout the whole of Africa, the Mediterranean and West Asia to India, it was not before recorded explicitly from Gambia (WIESNER 2001).

Cicindela neglecta neglecta (DEJEAN, 1825): Abuko NP, 19.10.1999, W. SCHACHT. Kaloli, 6.-19.7.2000; Barra, 16.7.2000; R. GRIMM. - Distribution: Widely distributed in northern sub-Saharan Africa, first record from Gambia by WERNER (1996).

Cicindela senegalensis (DEJEAN, 1825): Kiang West NP, Tubab Kollon Pt., 6.11. 1998, W. SCHACHT. - Distribution: Widely distributed in northern sub-Saharan and Central Africa. First record from Gambia by WERNER (1996).

Cicindela vicina vicina (DEJEAN, 1831): Umg. Georgetown, 13.30N, 14.47W, 20.8. 1989, H.J. BREMER. - Distribution: Widely distributed in the northern half of sub-Saharan Africa, south to Zaire, Angola, and Malawi. According to WIESNER (in litt.) recorded from Mauritania and Senegal, though not yet from Gambia.

Cratohaera brunet (GORY, 1833): Kabafita Forest Park, 10.7.2000, R. GRIMM. - Distribution: Distributed in sub-Saharan West Africa, including Gambia (WIESNER 2001).

Cylindera octoguttata octoguttata (FABRICIUS, 1787): Abuko NP, 29.10. 1998, K.-M. CHEN (det. K. WERNER s. SCHACHT 2000: 3). - Distribution: Widely distributed in sub-Saharan and Central Africa. Recorded from Senegal by BASILEWSKY (1969) and from Gambia by SCHACHT (2000), det. K. WERNER.

Euryarthron festivum (DEJEAN, 1831): Kabafita Forest Park, 10.7.2000, 19.7.2000, R. GRIMM. - Distribution: According to WIESNER (2001) a West African species, occurring from Gambia to Zaire.

Lophyra luxerii (DEJEAN, 1831): Kabafita Forest Park, 10.7.2000; Nyambai Forest Park, 19.7.2000; R. GRIMM. - Distribution: A West African species, new for Gambia.

Habrodera nitidula nitidula (DEJEAN, 1825): Bakau, 21.7.1998, 12.-25.10.1999, W. SCHACHT. Se Recunda, 31.5.-14.6.2001, D. JUNGWIRTH. Banjul, 10.2002, K. HANDKE. - Distribution: According to WIESNER (2001) widely distributed in northern sub-Saharan and Central Africa, including Gambia.

***Prothyma concinna concinna* (DEJEAN, 1831):** Kabafita Forest Park, 10.7.2000, R. GRIMM. - Distribution: West African species, distributed from Mauritania to Senegal (BASILEWSKY 1969). According to WIESNER (2001) new for Gambia.

Ozaenini

***Afrozaena lutea* (HOPE, 1842):** Abuko NP, 13.10.1999, R. GRIMM. - Distribution: According to BASILEWSKY (1968) distributed in West Africa from Cameroon to northern Angola. Recorded from Senegal (BASILEWSKY 1965), but not from Gambia.

Paussini

***Paussus armatus* WESTWOOD, 1833:** Kolili, 8.-20.2.2000; Jangjangbureh vic., 13.7.2000; Bakau, 9.2.2000; R. GRIMM. Se Recunda, 31.5.-14.6.2001, D. JUNGWIRTH. - Distribution: Widely distributed in sub-Saharan and Central Africa. recorded from Senegal (BASILEWSKY 1969), though probably not explicitly recorded from Gambia.

***Paussus cornutus* CHEVROLAT, 1832:** Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Ranger Station, 17.10.1999; W. SCHACHT. Jangjangbureh vic., 13.7.2000, R. GRIMM. - Distribution: Widely distributed in sub-Saharan and Central Africa. Probably not explicitly recorded from Gambia.

***Paussus laevifrons* (WESTWOOD, 1833):** Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. Kiang West NP, Ranger Point, 18.10.1999; Abuko NP, 13.10.1999; Jangjangbureh vic., 13.7.2000; Kolili, 8.-20.2.2000; R. GRIMM. - Distribution: Widely distributed in sub-Saharan and Central Africa, recorded from Senegal (BASILEWSKY 1965, 1969), but apparently not yet from Gambia.

Carabini

***Calosoma senegalense* DEJEAN, 1831:** Bakau env., 12.-25.10.1999, W. SCHACHT. Kiang West NP, Ranger Point, 18.10.1999; Kolili, 6.-19.7.2000; R. GRIMM. - Distribution: Distributed through almost all of sub-Saharan Africa, described from Senegal, though apparently not yet explicitly recorded from Gambia.

Omophronini

***Omophron minutum* DEJEAN, 1831:** Kiang West NP, Headquarter, 16.10.1999, W. SCHACHT. - Distribution: A West African species, described from Senegal (CSIKI 1927, BASILEWSKY 1969), though not yet recorded from Gambia.

Scaritini

***Clivina consobrina* PUTZEYS, 1866:** Abuko NP, 13.10.1998, 30.10.1998, 3.11.1998; Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Ranger Station, 17.10.1999; W. SCHACHT. - Distribution: A common species that is known from West Africa, including Senegal (BASILEWSKY 1965, 1968, 1969). Probably new for Gambia.

***Clivina erythropyga* PUTZEYS, 1866:** Abuko NP, 3.11.1998; Kiang West NP, Jalandi, 1.11.1998; W. SCHACHT. - Distribution: Very widely distributed through Africa south of

the Sahara (BASILEWSKY 1968) including Senegal (BASILEWSKY 1964, 1969), though apparently not yet from Gambia.

***Clivina normandi* KULT, 1959:** Georgetown, 10.2002, K. HANDKE. - Distribution: According to KULT (1959) an uncommon species that is known so far from "Senegal: Gambia" which probably means only Gambia, since at the time of description "Gambia" was only a part of Senegal.

***Clivina stefaniana* MÜLLER, 1942:** Janjangbureh vic., 13.7.2000; Kolili, 6.-19.7.2000; R. GRIMM. - Distribution: Very widely distributed through Africa south of the Sahara (BASILEWSKY 1962b), though apparently not yet from Gambia.

***Cribrodyschirius congoensis* (ROUSSEAU, 1905):** Abuko NP, 30.10.1998; Abuko NP, 3.11.1998; W. SCHACHT. - Distribution: Distributed in West Africa from Senegal to Zaire (BASILEWSKY 1968, 1969), apparently not yet recorded from Gambia.

***Distichus gagatinus* (DEJEAN, 1831):** Kiang West NP, Ranger Point, 18.10.1999; Jalambere, 19.2.2000; Pakaliba, 19.2.2000; Sibanor, 19.2.2000; Bwiam, 17.2.2000; Nyambai, 15.2.2000; Salangi Forest Pk., 13.2.2000; Kabakama, 13.7.2000; R. GRIMM. - Distribution: Very widely distributed in West and Central Africa. Recorded from Senegal by BASILEWSKY (1956, 1968, 1969), but apparently not yet from Gambia.

***Dyschirius exaratus* PUTZEYS, 1866:** Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: Widely distributed in the northern half of sub-Saharan Africa (BASILEWSKY 1961a), recorded from Senegal (BASILEWSKY 1969), though not yet from Gambia.

***Dyschirius zanzibaricus* CHAUDOIR, 1878:** Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: According to BASILEWSKY (1961a) distributed through almost the whole of sub-Saharan Africa, recorded from Mauritania and Senegal (BASILEWSKY 1956, 1964), though not yet from Gambia.

***Neochryopus savagei* (HOPE, 1842):** Abuko NP, 19.10.1999, R. GRIMM. - Distribution: According to BASILEWSKY (1968) distributed in West Africa and Central Africa. Not yet recorded from Gambia.

***Pseudoclivina mandibularis* (DEJEAN, 1831):** Kolili, 6.-19.7.2000, R. GRIMM. Tanji Bird Res., 21.10.1999, W. SCHACHT. - Distribution: Widely distributed in West and Central Africa. Recorded from Mauritania (BASILEWSKY 1970) and Senegal (BASILEWSKY 1965), but apparently not yet from Gambia.

***Scarites edentatus* BÄNNINGER, 1932:** Gunjur, 12.7.1998, W. SCHACHT. Sibanor, 19.2.2000; Pakaliba, 19.2.2000; Salangi Forest Pk., 13.2.2000; R. GRIMM. - Distribution: According to BÄNNINGER (1938) an East African species. New for Gambia and generally West Africa. - Note: The specimens were identified using BÄNNINGER's (1938) key where they clearly key out at *S. edenatus* BÄNNINGER, instead of the West African *S. quadratus* FABRICIUS. I have not seen any types of *S. edentatus*, so I am unable to decide, whether BÄNNINGER's key is wrong in distinguishing both species. For the present, therefore, I don't have any reason to doubt the occurrence of *S. edentatus* in Gambia.

Cymbionotini

***Cymbionotum rufotestaceum* (FAIRMAIRE, 1893):** Kiang West NP, Tubab Kollon Pt., 6.11.1998, W. SCHACHT. - Distribution: According to BASILEWSKY (1961a) recorded from Tschad, though not yet from Senegal or Gambia.

***Cymbionotum schueppelii* (DEJEAN, 1825):** Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. - Distribution: Widely distributed in the northern part of sub-Saharan Africa, recorded from Mauritania, Tschad and adjacent countries (BASILEWSKY 1961a), but not yet from Senegal and Gambia.

Bembidiini

***Bembidion foveolatum* DEJEAN, 1831:** Abuko NP, 30.10.1998, 3.11.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: Ranges through almost the whole of sub-Saharan Africa, recorded from Mauritania (BASILEWSKY 1964) and Senegal (BASILEWSKY 1950b, 1956), but not yet recorded from Gambia.

***Elaphropus nigrutilus* BURGEON, 1935:** Abuko NP, 30.10.1998, W. SCHACHT. - Distribution: According to BASILEWSKY (1948) so far known from eastern Zaire, and to BASILEWSKY (1956) and BRUNEAU DE MIRÉ (1964) also for Guinea. New for Gambia and generally for the northern part of West Africa.

***Lymanastis macrops* JEANNEL, 1932:** Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: A West and Central African species (BASILEWSKY 1961a), recorded from Mauritania (BASILEWSKY 1964, 1970) and Senegal (BASILEWSKY 1969), but not yet from Gambia.

***Lymanastis niloticus niloticus* MOTSCHULSKY, 1862:** Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: Widely distributed through the whole of Africa south of the Sahara (BASILEWSKY 1968) including Mauritania (BASILEWSKY 1964) and Senegal (BASILEWSKY 1969), probably not yet recorded from Gambia.

Lymanastis schachtii sp. nov. (Fig. 1)

Holotypus. ♀, Gambia, Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT (ZSM).

Diagnosis. Small species, distinguished from most of the related species by its narrow, elongate body shape; further from *L. galilaeus* LA BRULERIE, 1875, *L. macrops* JEANNEL, 1932, *L. decorsei* JEANNEL, 1932, and *L. tibesticus* BRUNEAU DE MIRÉ, 1990 by the narrow and less cordiform pronotum and the remarkably wide, at posterior border conspicuously triangular excision of the transparent edge of the elytra; and from the similarly narrow and elongate Congolese *L. scaritides* BRUNEAU DE MIRÉ, 1965, by much smaller eyes and considerably longer antennae, and likewise by the conspicuously shaped apical margin of the elytra.

Description.

Measurements. Length (from apex of labrum to apex of elytra): 1.75 mm; width: 0.55 mm. Ratios. Width/length of pronotum: 1.17; width of base/width of apex of pronotum: 1.0; width of pronotum/width of head: 1.30; length/width of elytra: 1.90.

Colouration. Completely depigmented, surface including all appendages light yellow, pronotum and elytra somewhat translucent.

Head. Comparatively narrow and elongate, neck thick, head widest immediately at base. Labrum six-setose, with very deep, semicircular excision that in middle leaves only

a small margin. Clypeus and frons in middle convex, posteriorly to lateral parts of clypeal suture with a large, fairly deep groove on either side. Laterally of this groove and just about eye with a shallow carina that posteriorly extends to near posterior margin of eye. Eyes comparatively small, laterally very little projecting, about as long as distance between posterior border of eye and base of head. Eyes composed of about 50 ommatidia. Vertex dorsally slightly convex, without transverse impression. Mandibles short, strongly incurved towards apex. Labium in middle without a distinct tooth, though with a very shallow convexity only. Preapical palpomeres rather globular, densely pilose. Antenna rather short, surpassing base of pronotum by about three antennomeres. Median antennomeres slightly less than 1.5 x as long as wide. Only one elongate supraorbital seta present. Frons on either side behind clypeal suture with a postclypeal seta. Dorsal surface with iso-

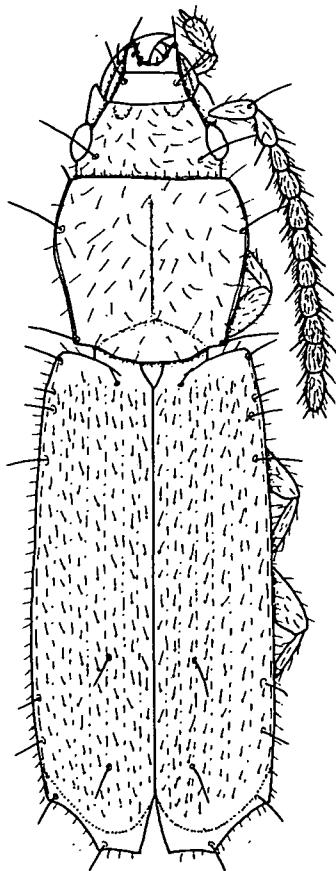


Fig. 1: *Lymnastis schachti* sp. nov. Habitus. Length: 1,75 mm.

diametric to slightly transverse microreticulation that becomes very superficial in middle, and with very sparse puncturation and comparatively elongate, erect pilosity.

Pronotum. Comparatively narrow, not much wider than long, dorsally rather convex, widest at about anterior two fifth. Apex very gently concave, apical angles rounded, not produced, lateral margin gently rounded in anterior two thirds, very faintly concave near basal angles which bear a minute denticle. Basal angles about 100°. Base in middle strongly lobate, laterally excised, lateral parts of base slightly oblique. Apex and base not bordered, lateral margin with narrow margin throughout. Median line distinct, not reaching apex, basal transverse sulcus deep, very oblique, laterally ending in the rather deep basal impressions. Both marginal setae elongate, anterior seta situated in front of widest diameter, basal seta set slightly inside of basal angle. Surface with about isodiametric microreticulation and with rather coarse and fairly dense puncturation. Anterior and lateral margins furnished with a fringe of rather short setae that are directed horizontally, surface with moderately elongate, erect to slightly inclined pilosity, and close to apex with a row of more elongate, erect setae.

Elytra. Comparatively narrow and elongate, almost twice as long as wide, widest at about apical third, though elytra but little widened towards apex. Humeri produced though convex, lateral margin almost straight and but faintly oblique. Lateral part of apex characteristically excised, median part straight and slightly oblique, with a distinct angle between median and lateral parts. Apex deeply cleft in middle. Transparent part of apex unusually wide. A similar sort of elytral apex has been never detected in any other species of *Lymnastis*. Surface very weakly though almost fully striate, intervals depressed, striae impunctate, though intervals each with a row of coarse punctures and short, erect setae. Lateral and apical margins with a fringe of rather short setae that are directed horizontally. 3rd interval with two elongate fixed setae, both situated in apical two fifth of elytra. Lateral margin apparently with a row of 4 anterior and 4 posterior marginal pores and setae, that is widely interrupted in middle, though all setae broken. Surface with about isodiametric, rather superficial microreticulation. Fully winged.

Lower surface. Whole lower surface sparsely pilose. Metepisternum very elongate. Female terminal abdominate sternite quadrisetose.

Male. Unknown.

Distribution. Gambia, Kiang West National Park, known only from type locality.

Collecting circumstances. Most probably sampled at light.

Remarks. Although the male genitalia of the new species are still unknown, the differences in size and shape between the sympatric species (as expressed in Tab. 1) as well as the extraordinary shape of the elytral apex clearly demonstrate that *L. schachtii* sp. nov. is a distinct species.

At the same locality and same date some specimens of *L. macrops* JEANNEL, 1932 and *L. n. niloticus* MOTSCHULSKY, 1862 were collected. All three species are well able to fly, though *L. schachtii* sp. nov. is distinguished from both species by smaller eyes. This may indicate a somewhat different way of life, but that is still unknown. Generally, very little is recorded about way of life and life history of any *Lymnastis* species, because the winged species almost invariably were captured only at light, whereas the wingless and small-eyed or eyeless species generally are sifted from the ground.

Tab. 1. Measurements and ratios of the North and West African eyed and winged species of *Lymanstis* MOTSCHULSKY. w/l pr: width/length of pronotum; w a/b pr: width of base/width of apex of pronotum; w pr/w h: width of pronotum/width of head; l/w el: length/width of elytra.

	N	length (mm)	w/l pr	w a/b pr	w pr/w h	l/w el
<i>niloticus</i>	4	2.25-2.50	1.19-1.25	1.05-1.14	1.45-1.50	1.69-1.79
<i>tibesticus</i>	1	2.00	1.27	1.05	1.54	1.73
<i>galilaeus</i>	7	1.65-1.80	1.26-1.31	0.95-1.00	1.29-1.32	1.60-1.68
<i>macrops</i>	7	1.50-1.60	1.23-1.28	0.98-1.02	1.25-1.30	1.68-1.76
<i>decorsei</i>	2	1.90-2.15	1.26-1.29	1.07-1.09	1.39-1.42	1.73-1.76
<i>scaritides</i>	1	1.60	1.12	1.00	1.25	1.98
<i>schachtii</i>	1	1.75	1.17	1.00	1.30	1.90

Polyderis brevicornis (CHAUDOIR, 1846): Abuko NP, 13.10.1998, 30.10.1998, 3.11.1998; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. - Distribution: Almost the whole of Africa (BASILEWSKY 1948), recorded from Mauritania (BASILEWSKY 1964) and Senegal (BASILEWSKY 1953b, 1956), but apparently not yet from Gambia.

Polyderis impressipennis (MOTSCHULSKY, 1860): Abuko NP, 13.10.1998, 30.10.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; W. SCHACHT. - Distribution: Distributed through the whole of Africa south of the Sahara, also in Asia. Recorded from Mauritania and Senegal (BASILEWSKY 1964, 1969), probably not yet recorded from Gambia.

Sphaerotachys fumigatus geminatus (SCHAUM, 1860): Abuko NP, 13.10.1998, 3.11.1998; Kiang West NP, Headquarter, 16.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: Ranges through the Oriental Region, northeastern and eastern Africa, in the north to Mauritania and Niger (BRUNEAU DE MIRÉ 1963). Recorded from Senegal (BASILEWSKY 1964), though not yet from Gambia.

Sphaerotachys haemorrhoidalis PONZA, 1805: Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: Distributed through the whole of Africa, also in southern Europe. Recorded from Senegal (BASILEWSKY 1964), though not yet from Gambia.

Tachys centromaculatus centromaculatus WOLLASTON, 1864: Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Ranger Station, 17.10.1999; W. SCHACHT. - Distribution: According to BASILEWSKY (1962b), known from Cap Verde Islands, Senegal, and Mauritania, probably not yet recorded from Gambia.

Tachys fasciatus fasciatus MOTSCHULSKY, 1851: Abuko NP, 3.11.1998, W. SCHACHT. - Distribution: The whole of Africa (BASILEWSKY 1948), also widely distributed in the Oriental and Australian regions. recorded from Senegal (BASILEWSKY 1964, 1969), but not yet from Gambia.

Tachys testaceus (BASILEWSKY, 1953): Abuko NP, 30.10.1998, 3.11.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. - Distribution: Described from Zaire (BASILEWSKY 1953b), not yet recorded from Gambia.

Tachyura amabilis (DEJEAN, 1831): Kiang West NP, Ranger Station, 17.10.1999, W.

SCHACHT. - Distribution: A West African species according to BRUNEAU DE MIRÉ (1964), recorded from Mauritania (BASILEWSKY 1964) and Senegal (BASILEWSKY 1950b, 1964, 1969), probably not yet recorded from Gambia.

Tachyura biplegiata (DEJEAN, 1831): Abuko NP, 3.11.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Headquarter, 16.10.1999; Kiang West NP, Ranger Station, 17.10.1999; Bakau env., 12.-25.10.1999; W. SCHACHT. - Distribution: Widely distributed in Africa except for South Africa (BASILEWSKY 1948), recorded from Mauritania (BASILEWSKY 1964) and Senegal (BRUNEAU DE MIRÉ 1964, BASILEWSKY 1968, 1969), but not yet from Gambia.

Tachyura germana (CHAUDOIR, 1876): Abuko NP, 13.10.1998, 30.10.1998, 3.11.1998; Bakau env., 12.-25.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: According to BRUNEAU DE MIRÉ (1964) and BASILEWSKY (1968) an East African species, but in that paper firstly recorded from Ivory Coast. Recorded from Senegal by BASILEWSKY (1969). Apparently new for Gambia.

Tachyura lucasii (DUVAL, 1852): Abuko NP, 13.10.1998; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: Ranges through the whole of Africa, also in the Mediterranean, recorded from Mauritania (BASILEWSKY 1964), and Senegal (BRUNEAU DE MIRÉ 1964, BASILEWSKY 1969), but not yet from Gambia.

Tachyura surda (BASILEWSKY, 1953): Abuko NP, 13.10.1998, W. SCHACHT. - Note: A West African species, according to BRUNEAU DE MIRÉ (1963) widely distributed in West Africa, though not yet recorded from neither Senegal nor Gambia.

Tachyura vagans (PERINGUEY, 1896): Kiang West NP, Headquarter, 16.10.1999, W. SCHACHT. - Distribution: According to BRUNEAU DE MIRÉ (1964) a southern species that is absent from West Africa, but to the north attains the Tschad. According to BASILEWSKY (1969) found in Senegal. New for Gambia.

Tachyura variabilis CHAUDOIR, 1876: Abuko NP, 30.10.1998, 3.11.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; W. SCHACHT. - Distribution: Widely distributed through almost the whole of Africa (BRUNEAU DE MIRÉ 1964) including Mauritania (BASILEWSKY 1964) and Senegal (BASILEWSKY 1950b, 1964), probably not yet recorded from Gambia.

Pogonini

Pogonius gilvipes DEJEAN, 1828: Kiang West NP, Ranger Station, 17.10.1999; Tanji Bird Res., 21.10.1999, W. SCHACHT. - Distribution: Very widely distributed along the coasts of almost the whole of Africa and Madagascar, likewise in the Mediterranean. Recorded from Tschad where it also occurs inland in saline habitats (BRUNEAU DE MIRÉ 1990), from Senegal (BASILEWSKY 1964), though not yet from Gambia.

Syrdenus grayii (WOLLASTON, 1862): Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: Originally described from the Canary Islands, it is widely distributed in the west Mediterranean, and in the northern part of West Africa. Recorded from Mauritania (BASILEWSKY 1970), Tschad (BRUNEAU DE MIRÉ 1990), where it also occurs inland in saline habitats, and Senegal (BASILEWSKY 1969). Probably new for Gambia.

Pterostichini

***Abacetes amaroides* LAFERTÉ, 1853:** Abuko NP, 30.10.1998, 3.11.1998; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: A West African species (CSIKI 1929), recorded from Senegal (BASILEWSKY 1969), but not yet from Gambia.

***Abacetes azureus* STRANEO, 1955:** Bakau env., 12.-25.10.1999, W. SCHACHT. - Distribution: A West African species, described from Nigeria, also recorded from Mauritania (STRANEO 1955).

***Abacetes brunneus* STRANEO, 1939:** Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: A West African species, described from Nigeria and Ivory Coast (STRANEO 1939, not yet recorded as far north as Senegal and Gambia).

***Abacetes cordatus* DEJEAN, 1831:** Abuko NP, 30.10.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; W. SCHACHT. - Distribution: A West African species, described from Senegal (CSIKI 1929, BASILEWSKY 1969), though not yet recorded from Gambia.

***Abacetes cribricollis* (DEJEAN, 1831):** Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: A West African species (CSIKI 1929), recorded from Guinea (STRANEO 1956a) and Senegal (STRANEO 1956c), though not yet from Gambia.

***Abacetes grandis* LAFERTÉ, 1853:** Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; W. SCHACHT. Tanji Bird Res., 21.10.1999, R. GRIMM. Georgetown, 10.2002, K. HANDKE. - Distribution: A West African species (CSIKI 1929), recorded from Senegal (BASILEWSKY 1969), but not yet from Gambia.

***Abacetes harpaloides harpaloides* LAFERTÉ, 1853:** Abuko NP, 30.10.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; Tanji Bird Res., 21.10.1999; W. SCHACHT. Abuko NP, 13.10.1999, R. GRIMM. - Distribution: A West and Central African species (CSIKI 1929), not yet recorded from Senegal and Gambia.

***Abacetes mouffleti* CHAUDOIR, 1876:** Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: A West African species, recorded from Senegal (CSIKI 1929, STRANEO 1955, BASILEWSKY 1969), though not yet from Gambia.

***Abacetes multipunctatus* STRANEO, 1956:** Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: Described from Zaire (STRANEO 1956c), not yet recorded from Senegal and Gambia.

***Abacetes parallelus parallelus* ROTH, 1851:** Abuko NP, 13.10.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: This is an eastern and southern species, not yet recorded from West Africa. The specimens from Gambia were compared with specimens in Museum voor Midden Africa, Tervuren, as well as with specimens identified by STRANEO in the collection of the author. Although the similarity is obvious, the identification is not absolutely certain, as the compared specimens could be misidentified as well.

***Abacetes picicollis* LAFERTÉ, 1853:** Abuko NP, 13.10.1998, 30.10.1998; Bakau env., 12.-25.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: A West African species (CSIKI 1929, BASILEWSKY 1961a), recorded from Senegal (STRANEO 1956b), though not yet from Gambia.

***Abacetes* sp.:** Abuko NP, 30.10.1998, W. SCHACHT. - Note: A single female specimen

of the subgenus *Astigis* RAMBUR, 1838. This is one of the most diverse and, at the same time, most difficult groups of *Abacetes*, thus the mentioned specimen at present is not determinable.

Aristopus maculatus (STRANEO, 1939): Janjangbureh vic., 13.7.2000, R. GRIMM. - Distribution: West and Central African species, recorded from Senegal (BASILEWSKY 1964), though not yet from Gambia.

Caelostomus pavidus (LAFERTÉ, 1853): Nyambai Forest Park, 10.7.2000, R. GRIMM. - Distribution: West African species, recorded from Senegal (BASILEWSKY 1964), though not yet from Gambia.

Caelostomus punctifrons (CHAUDOIR, 1850): Kiang West NP, Jalandi, 1.11.1998; Tanji Bird Res., 21.10.1999; W. SCHACHT. Abuko NP, 10.7.2000, R. GRIMM. Georgetown, 10.2002, K. HANDKE. - Distribution: A West African species, recorded from "Senegambien" by CSIKI (1931) and from Senegal proper by BASILEWSKY (1969).

Caelostomus striatocollis striatocollis (DEJEAN, 1831): Bakau env., 12.-25.10.1999; Kolili, 6.-19.7.2000; R. GRIMM. - Distribution: West African species, recorded from Senegal (BASILEWSKY 1964, 1969), though not yet from Gambia.

Chlaeminus senegalensis senegalensis STRANEO, 1939: Kiang West NP, Headquarter, 16.10.1999, W. SCHACHT. - Distribution: Described from Senegal (STRANEO 1939), though not yet recorded from Gambia.

Harpalini

Anthraxus angusticollis (PERINGUEY, 1908): Abuko NP, 3.11.1998; Bakau env., 12.-25.10.1999; Kiang West NP, Ranger Station, 17.10.1999; W. SCHACHT. - Distribution: Originally (BASILEWSKY 1951) referred to as an East and South African species, later, however, recorded from Mauritania by BASILEWSKY (1970) and from Tschad by MATEU (1966). Not yet recorded from Senegal and Gambia.

Aulacoryssus aciculatus aciculatus (DEJEAN, 1829): Abuko NP, 13.10.1998, W. SCHACHT. - Distribution: Nominate subspecies distributed in West and Central Africa, according to (BASILEWSKY 1950a) recorded from Senegal and Gambia.

Aulacoryssus pulchellus (DEJEAN, 1829): Abuko NP, 13.10.1998, 3.11.1998; Kiang West NP, Headquarter, 16.10.1999; Kiang West NP, Jalandi, 1.11.1998; Bakau env., 12.-25.10.1999; W. SCHACHT. Tanji Bird Res., 21.10.1999; Tendaba, 14.7.2000; Kolili, 6.-19.7.2000; R. GRIMM. Georgetown, 10.2002; Banjul, 10.2002; K. HANDKE. - Distribution: Ranges through the whole of sub-Saharan Africa, according to (BASILEWSKY 1950a) recorded from Senegal and Gambia.

Axinotoma fallax DEJEAN, 1829: Abuko NP, 13.10.1998; Kiang West NP, Ranger Station, 17.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: Almost the whole of sub-Saharan Africa, except for the southern part. According to (BASILEWSKY 1950a) recorded from Senegal and Gambia.

Bradybaenus scalaris scalaris (OLIVIER, 1808): Georgetown, 10.2002, K. HANDKE. Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: Nominate subspecies widely distributed through sub-Saharan West and Central Africa, according to BASILEWSKY (1950a) West African species, recorded from Mauritania (BASILEWSKY 1964) and Senegal (BASILEWSKY 1951), though not yet from Gambia.

Egadroma discriminatum BASILEWSKY, 1948: Abuko NP, 30.10.1998; Kiang West

NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; W. SCHACHT. Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: Distributed through the sub-Saharan northern half of Africa, recorded from Senegal (BASILEWSKY 1951, 1969) and Mauritania (BASILEWSKY 1964), though not yet from Gambia.

Egadroma fugax (DEJEAN, 1829): Abuko NP, 13.10.1998, 3.11.1998; Kiang West NP, Headquarter, 16.10.1999; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Bakau env., 12.-25.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. Janjangbureh vic., 13.7.2000, R. GRIMM. - Distribution: Ranges through the sub-Saharan northern half of Africa, recorded from Senegal (BASILEWSKY 1951, 1969) and Mauritania (BASILEWSKY 1964), though not yet from Gambia.

Egadroma humerale (DEJEAN, 1831): Kiang West NP, Headquarter, 16.10.1999, W. SCHACHT. - Distribution: West African species, according to BASILEWSKY (1951) recorded from Senegal, though not yet from Gambia.

Egadroma obockianum (FAIRMAIRE, 1892): Abuko NP, 13.10.1998; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: Distributed through the sub-Saharan Sahelian belt, West African species, according to BASILEWSKY (1951) recorded from Senegal, though not yet from Gambia.

Egadroma relucens (ERICHSON, 1843): Abuko NP, 13.10.1998, W. SCHACHT. - Distribution: Distributed through the northern half of sub-Saharan Africa, according to BASILEWSKY (1951, 1969) recorded from Senegal, though not yet from Gambia.

Egadroma scapulare (DEJEAN, 1831): Abuko NP, 13.10.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. - Distribution: Distributed through almost the whole of sub-Saharan Africa, according to BASILEWSKY (1951, 1969) recorded from Senegal, though not yet from Gambia.

Egadroma sp.: Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Note: An unique freshly hatched, completely light yellow female specimen that does not match any of the compared species. Due to absence of a male, probably this is not determinable.

Egaploa fulvipes fulvipes (ERICHSON, 1843): Abuko NP, 30.10.1998, W. SCHACHT. - Distribution: The nominate subspecies is distributed through almost the whole of sub-Saharan Africa, a second subspecies lives in tropical Asia. Recorded by (BASILEWSKY 1951) from Senegal and Gambia, still under the name *Egaploa crenulata* (DEJEAN, 1829).

Geodromus dumolini DEJEAN, 1829: Georgetown, 10.2002, K. HANDKE. Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: The species was described from Senegal, though according to BASILEWSKY (1951) not recaptured since description. Either it is very rare, or has very unusual habits, or was misidentified since. The two female specimens from Gambia that exactly match BASILEWSKY's redescription, even when the aedeagus cannot be compared, demonstrate that DEJEAN's locality report was right, in spite of BASILEWSKY's (1951: 105) doubts.

Hyparpalus holosericus (DEJEAN, 1829): Abuko NP, 13.10.1998, 30.10.1998, 3.11.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: The whole of sub-Saharan Africa (BASILEWSKY 1951). According to LECORDIER (1988) recorded from Senegal, but not yet from Gambia.

Hyparpalus saponarius (OLIVIER, 1795): Abuko NP, 13.10.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; Tanji Bird Res., 21.10.

1999; W. SCHACHT. Abuko Nat. Res., 11.88, H. TERLUTTER. - Distribution: Almost the whole of sub-Saharan Africa (BASILEWSKY 1951). According to LECORDIER (1988) recorded from Senegal, but not yet from Gambia.

Hyparpalus tomentosus (DEJEAN, 1829): Abuko NP, 13.10.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; W. SCHACHT. Georgetown, 10.2002, K. HANDKE. - Distribution: The whole of sub-Saharan Africa (BASILEWSKY 1951). According to LECORDIER (1988) recorded from Senegal, but not yet from Gambia.

Hyparpalus velutinus (DEJEAN, 1829): Abuko NP, 13.10.1998; Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; W. SCHACHT. - Distribution: Very widely distributed in West and Central Africa. Recorded from Senegal by BASILEWSKY (1965), but apparently not yet from Gambia.

Loxoncus alacer (DEJEAN, 1831): Abuko NP, 3.11.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; W. SCHACHT. - Distribution: A West African species, recorded from Senegal and Gambia (BASILEWSKY 1951).

Neosiopelus consobrinus (DEJEAN, 1829): Abuko NP, 3.11.1998, W. SCHACHT. - Distribution: West and Central African species, recorded from Mauritania (BASILEWSKY 1964) and from Senegal (BASILEWSKY 1950a, 1964), though not yet from Gambia.

Platymetopus brevilabris LAFERTÉ, 1853: Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: According to (BASILEWSKY 1950a) a West and Central African species, recorded from Senegal (BASILEWSKY 1965), but not yet from Gambia.

Platymetopus lepidus DEJEAN, 1829: Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: West African species, recorded from Senegal (BASILEWSKY 1950a, 1961a), though apparently not yet from Gambia.

Platymetopus schoenherri DEJEAN, 1831: Tanji Bird Res., 21.10.1999, W. SCHACHT. - Distribution: According to BASILEWSKY (1950a) a West and Central African species, recorded from Senegal (BASILEWSKY 1965), though not yet from Gambia.

Platymetopus tessellatus DEJEAN, 1829: Bakau env., 12.-25.10.1999, W. SCHACHT. Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: West African species, recorded from Mauritania (BASILEWSKY 1964) and Senegal (BASILEWSKY 1950a), though apparently not yet from Gambia.

Platymetopus vestitus DEJEAN, 1829: Kiang West NP, Tubab Kollon Pt., 6.11.1998, W. SCHACHT. Georgetown, 10.2002; Banjul, 10.2002; Tendaba Camp, 10.2002; K. HANDKE. - Distribution: West African species, known from Senegal and Gambia (BASILEWSKY 1950a).

Progonochaetus bicoloripes (BURGEON, 1936): Kiang West NP, Tubab Kollon Pt., 6.11.1998, W. SCHACHT. - Distribution: Almost the whole of sub-Saharan Africa (BASILEWSKY 1950a), but not yet recorded from Gambia.

Progonochaetus moestus moestus (CHAUDOIR, 1878): Abuko NP, 13.10.1998, W. SCHACHT. - Distribution: Almost the whole of sub-Saharan Africa (BASILEWSKY 1950a), including Senegal (BASILEWSKY 1956) but not yet recorded from Gambia.

Progonochaetus obtusus (BASILEWSKY, 1946): Abuko NP, 30.10.1998, W. SCHACHT. - Distribution: West Africa, according to (BASILEWSKY 1950a, 1956) from Guinea to Cameroon, also in Senegal (BASILEWSKY 1969), though not yet recorded from Gambia.

***Progonochaetus vagans* (DEJEAN, 1831):** Georgetown, 10.2002, K. HANDKE. - Distribution: West Africa, recorded from Senegal and Gambia (BASILEWSKY 1950a).

***Progonochaetus xanthopus* (DEJEAN, 1829):** Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. - Distribution: Widely distributed through the sub-Saharan belt of Africa, including Gambia (BASILEWSKY 1950a).

***Xenodochus exaratus* (DEJEAN, 1829):** Tanji Bird Res., 21.10.1999, W. SCHACHT. - Distribution: West African species, according to BASILEWSKY (1950a) recorded from Senegal and Gambia.

***Xenodochus micans* (DEJEAN, 1831):** Tanji Bird Res., 21.10.1999, W. SCHACHT. - Distribution: Distributed through most of sub-Saharan Africa, according to BASILEWSKY (1950a) recorded from Senegal and Gambia.

***Xenodochus senegalensis* (DEJEAN, 1829):** Tendaba, 14.7.2000, R. GRIMM. Umgeb. Fajara, 13.28N, 18.43W, 2.-20.VIII.1989, H. BREMER. - Distribution: West African species, according to BASILEWSKY (1950a, 1969) recorded from Senegal, but not yet from Gambia.

Amblystomini

***Amblystomus dispar* BASILEWSKY, 1951:** Bakau env., 12.-25.10.1999, W. SCHACHT. - Distribution: Described from Senegal and Sudan (BASILEWSKY 1951), not yet recorded from Gambia.

***Amblystomus indotatus* BASILEWSKY, 1946:** Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: A West African species, according to BASILEWSKY (1951, 1953a) recorded from Senegal, though not yet from Gambia.

***Amblystomus latefasciatus* BASILEWSKY, 1963:** Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: A West African species, recorded from Mauritania (BASILEWSKY 1964) and Senegal (BASILEWSKY 1968), though not yet from Gambia.

***Amblystomus quadrillum* (DEJEAN, 1829):** Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: Widely distributed through the northern part of sub-Saharan Africa, from Senegal to Sudan (BASILEWSKY 1951, 1969), not yet recorded from Gambia.

***Amblystomus seriepunctatus* BASILEWSKY, 1948:** Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; W. SCHACHT. - Distribution: Widely distributed through the northern part of sub-Saharan Africa, from Senegal to Sudan (BASILEWSKY 1951, 1953a), not yet recorded from Gambia.

***Amblystomus viridulus* (ERICHSON, 1843):** Bakau env., 12.-25.10.1999, W. SCHACHT. - Distribution: Originally described from Cap Verde Islands and doubtfully recorded from mainland Africa (BASILEWSKY 1951), later recorded from Mauritania and Senegal (BASILEWSKY 1963, 1964), though not yet from Gambia.

Panagaeini

***Craspedophorus brevicollis* (DEJEAN, 1831):** Banjul National Airport, 20.7.2000; Si-banor, 2.7.2000; Kolili, 6.-19.7.2000; R. GRIMM. - Distribution: A West African species,

recorded from Senegal (CSIKI 1931, BASILEWSKY 1969), though not yet from Gambia.

Microcosmodes cruciatus (DEJEAN, 1831): Abuko NP, 30.10.1998, W. SCHACHT. - Distribution: West African species (BASILEWSKY 1968), probably not yet recorded from Gambia.

Microcosmodes symei (MURRAY, 1857): Abuko NP, 13.10.1998, W. SCHACHT. - Distribution: West and Central African species (BASILEWSKY 1968), recorded from Senegal (BASILEWSKY 1953b), but not yet from Gambia.

Chlaeniini

Callistoides pulchellus (BOHEMAN, 1848): Abuko NP, 13.10.1998, 19.10.1998, 30.10.1998, W. SCHACHT. - Distribution: Distributed trough almost the whole of Africa, recorded from Senegal (BASILEWSKY 1969), but not yet from Gambia.

Callistoides venustulus (DEJEAN, 1831): Abuko NP, 13.10.1998; Kiang West NP, Jalandi, 1.11.1998; W. SCHACHT. - Distribution: A West African species, according to BASILEWSKY (1953a) recorded from Senegal, though not yet from Gambia.

Chlaenius amimon (FABRICIUS, 1801): Tanji Bird Res., 21.10.1999, W. SCHACHT. - Distribution: A West African species, recorded from Senegal (CSIKI 1931, BASILEWSKY 1956, 1969), though not yet from Gambia.

Chlaenius analis (OLIVIER, 1795): Georgetown, 10.2002, K. HANDKE. Kiang West NP, W. SCHACHT. - Distribution: A West African species, recorded from Senegal (CSIKI 1931), though not yet from Gambia.

Chlaenius carbonatus CHAUDOIR, 1876: Umgeb. Fajara, 13.28N, 18.43W, 2.-20.VIII. 1989, H. BREMER. Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: Widely distributed through the northern half of sub-Saharan Africa, recorded from Senegal (BASILEWSKY 1961a), though not from Gambia.

Chlaenius croesus (FABRICIUS, 1801): Umgeb. Fajara, 13.28N, 18.43W, 2.-20.VIII. 1989, H. BREMER. - Distribution: Distributed mainly in sub-Saharan northern Africa, recorded from Senegal (BASILEWSKY 1950b, 1964), but not yet from Gambia.

Chlaenius denticulatus denticulatus DEJEAN, 1831: Abuko NP, 13.10.1998, 30.10.1998, 3.11.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: Whole northern half of sub-Saharan Africa (BASILEWSKY 1953b), recorded from Mauritania (BASILEWSKY 1970) and Senegal (BASILEWSKY 1950b, 1969), but not yet from Gambia.

Chlaenius dusaulti dusaulti (DUFOUR, 1821): Abuko NP, 3.11.1998; Kiang West NP, Jalandi, 1.11.1998; Bakau, 12.-25.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. Kolili, 6.-19.7.2000; Abuko NP, 13.10.1999; R. GRIMM. Georgetown, 10.2002, K. HANDKE. - Distribution: The nominate subspecies ranges through West Africa from Senegal to Cameroon (BASILEWSKY 1953b, 1956, 1969), apparently not yet recorded from Gambia.

Chlaenius goryi GORY, 1833: Abuko NP, 30.10.1998, W. SCHACHT. - Distribution: Distributed through almost the whole of sub-Saharan Africa, south to about Zaire (BASILEWSKY 1953b), recorded from Senegal (BASILEWSKY 1965), though not yet from Gambia.

Chlaenius meticolosus LAFERTÉ, 1851: Nyambai Forest Park, 18.2.2000, R. GRIMM. - Distribution: A West and Central African species, recorded from Senegal (BASILEWSKY 1965, 1969), though not yet from Gambia.

Chlaenius morosus LAFERTÉ, 1851: Georgetown, 10.2002, K. HANDKE. Tanji Bird Res., 21.10.1999; Kiang West NP, Jalandi, 1.11.1998; W. SCHACHT. - Distribution: A West African species, recorded from "Senegambien" by CSIKI (1931), and from Senegal by BASILEWSKY (1969), though not yet from Gambia.

Chlaenius palpalis LAFERTÉ, 1851: Tanji Bird Res., 21.10.1999, W. SCHACHT. - Distribution: A West African species, Distributed from Senegal to Ivory Coast (BASILEWSKY 1968), not yet recorded explicitly from Gambia.

Chlaenius sp.: Küste b. Banjul, 10. 2002, K. HANDKE. - Note. The single specimen represents a species of the very diverse subgenus *Chlaenius* s. str. and judging from shape and structure of the surface of the elytra it belongs in the vicinity of the eastern *C. sculptilis* BATES, 1886, and *S. systelocranoides* ALLUAUD, 1933. The species has not been found in the collection of Museum voor Midden Africa, Tervuren.

Eccoptomenus eximius eximius (DEJEAN, 1831): Abuko NP, 13.10.1998, W. SCHACHT. Abuko NP, 19.10.1999, R. GRIMM. Umgeb. Fajara, 13.28N, 18.43W, 2.-20. VIII.1989, H. BREMER. - Distribution: A West and Central African species, recorded from Senegal (BASILEWSKY 1968), though not yet from Gambia.

Oodini

Brachyodes senegalensis (DEJEAN, 1831): Janjangbureh vic., 13.7.2000; Kolili, 6.-19.7.2000; R. GRIMM. - Distribution: West African species, recorded from Senegal (LECORDIER & GIRARD 1990), though apparently not yet from Gambia.

Brachyodes sp.: Abuko NP, 30.10.1998, 3.11.1998, W. SCHACHT. - Note: Not found in the collection of Museum voor Midden Africa. At present not determinable, because of the lack of any reliable keys.

Melanchiton parallelus parallelus (CHAUDOIR, 1883): Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. - Distribution: Identification verified by genital examination. According to STRANEO (1950) widely distributed in the northern part of Central and East Africa, from Ubangi-Chari to Abyssinia. Probably not yet recorded in more northern parts of Africa, certainly not yet from Gambia.

Melanchiton senegalensis STRANEO, 1943: Abuko NP, 30.10.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25. 10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. Georgetown, 10.2002, K. HANDKE. - Distribution: A West African species, described from Senegal (STRANEO 1950), though not yet recorded from Gambia.

Masoreini

Somoplatus fulvus MULSANT & GODART, 1867: Abuko NP, 13.10.1998, W. SCHACHT. - Distribution: A West and Central African species, recorded from Senegal (BASILEWSKY 1969, 1986), though not yet from Gambia.

Tetragonoderini

Tetragonoderus interruptus DEJEAN, 1829: Kiang West NP, Ranger Station, 17.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: A West African species

(BASILEWSKY 1968), recorded from Senegal (BASILEWSKY 1965, 1969), though not yet from Gambia.

Tetragonoderus quadrimaculatus GORY, 1833: Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: A West and Central African species (BASILEWSKY 1968), recorded from Senegal (BASILEWSKY 1965), though not yet from Gambia.

Tetragonoderus quadruus (FABRICIUS, 1792): Abuko NP, 13.10.1998; Kiang West NP, Headquarter, 16.10.1999; Bakau env., 12.-25.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. Banjul, 10.2002, K. HANDKE. - Distribution: Distributed through the northern part of sub-Saharan Africa, recorded from Mauritania and Senegal (BASILEWSKY 1961a, 1964, 1970), though apparently not yet from Gambia.

Tetragonoderus viridicollis DEJEAN, 1829: Kiang West NP, Headquarter, 16.10.1999; Kiang West NP, Jalandi, 1.11.1998; W. SCHACHT. Abuko NP, 13.10.1999; Kolili, 6.-19.7.2000; R. GRIMM. - Distribution: A West and Central African species recorded from Senegal (BASILEWSKY 1965, 1969), though not yet from Gambia.

Graphipterini

Graphipterus obsoletus obsoletus (OLIVIER, 1795): Kabafita Forest Park, 10.7.2000, R. GRIMM. - Distribution: West African subspecies, recorded from Senegal, Mauritania, Mali, and Niger (BASILEWSKY 1977), though probably not yet from Gambia.

Anthiini

Anthia nimrod (FABRICIUS, 1793): Nyambai Forest Park, 18.2.2000, R. GRIMM. - Distribution: A West African species, recorded from Mauritania (BASILEWSKY 1970) and Senegal (BASILEWSKY 1965), though not yet from Gambia.

Odacanthini

Archicolliuris dimidiata (CHAUDOIR, 1848): Abuko NP, 13.10.1998, 30.10.1998; Kiang West NP, Headquarter, 16.10.1999; Kiang West NP, Ranger Station, 17.10.1999; Bakau env., 12.-25.10.1999; W. SCHACHT. Abuko NP, 13.10.1999, R. GRIMM. - Distribution: According to LIEBKE (1931) a West and Central African species, recorded from Senegal, though not yet from Gambia.

Archicolliuris fasciata (LAFERTÉ, 1849): Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: A West and Central African species (LIEBKE 1931), recorded from Senegal (BASILEWSKY 1969), but not yet from Gambia.

Lachnothorax pustulatus (DEJEAN, 1831): Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; Bakau, 12.-25.10.1999; W. SCHACHT. Abuko NP, 13.10.1999; Kolili, 6.-19.7.2000; R. GRIMM. Umgeb. Fajara, 13.28N, 18.43W, 2.-20.VIII.1989, H. BREMER. - Distribution: Very widely distributed through sub-Saharan Africa (BASILEWSKY 1962b), according to LIEBKE (1931) and BASILEWSKY (1960b) recorded from Senegal, though probably not yet recorded from Gambia.

Lasiocera nitidula DEJEAN, 1831: Bakau env., 12.-25.10.1999, W. SCHACHT. Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: According to LIEBKE (1937) distributed in the northern part of sub-Saharan Africa, recorded from Senegal (BASILEWSKY 1953a, 1964,

1969), though not yet from Gambia.

Dryptini

Drypta ruficollis DEJEAN, 1931: Abuko NP, 13.10.1998; Tanji Bird Res., 21.10.1999; Kiang West NP, Tubab Kollon Pt., 6.11.1998; W. SCHACHT. Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: Widely distributed through almost the whole of sub-Saharan Africa including Senegal (BASILEWSKY 1968, 1969), but not yet recorded from Gambia.

Galeritini

Galerita africana DEJEAN, 1825: Abuko NP, 13.10.1999, R. GRIMM. Kiang West NP, Jalandi, 1.11.1998; Kiang West NP, Tubab Kollon Pt., 6.11.1998; Kiang West NP, Ranger Station, 17.10.1999; Tanji Bird Res., 21.10.1999; W. SCHACHT. - Distribution: Distributed through the whole northern half of sub-Saharan Africa, including Senegal (BASILEWSKY 1953b, 1969), though not yet recorded from Gambia.

Zuphiini

Zuphium fuscum GORY, 1830: Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: Widely distributed through sub-Saharan Africa except for the southern part, recorded from Mauritania (BASILEWSKY 1970) and Senegal (BASILEWSKY 1962b, 1969), but not yet from Gambia.

Lebiini

Calleida fasciata DEJEAN & BOISDUVAL, 1829: Abuko NP, 19.10.1999, R. GRIMM. Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: Widely distributed through almost the whole of sub-Saharan Africa. Recorded from Senegal (BASILEWSKY 1965), but probably not yet recorded from Gambia.

Catascopus senegalensis DEJEAN, 1831: Abuko NP, 13.10.1999, R. GRIMM. - Distribution: West and Central African species (BASILEWSKY 1968), recorded from Senegal, but probably not yet recorded from Gambia.

Catascopus rufipes GORY, 1833: Nema, 12.7.2000; Bondali, 15.7.2000; R. GRIMM. - Distribution: Widely distributed in sub-Saharan Africa (BASILEWSKY 1968), but probably not yet recorded from Gambia.

Cymindoidea bisignata (DEJEAN, 1831): Kolili, 8-20.2.2000; Sibanor, 19.2.2000; R. GRIMM. Umgeb. Fajara, 13.28N, 18.43W, 2.-20.VIII.1989, H. BREMER. Georgetown, 10.2002, K. HANDKE. - Distribution: West Africa east to Sudan (BASILEWSKY 1961b). Known from Senegal (BASILEWSKY 1969), but apparently first published record for Gambia.

Lebia melanura DEJEAN, 1831: Abuko NP, 19.10.1998, W. SCHACHT. - Distribution: West African species (BASILEWSKY 1968), recorded from Senegal (BASILEWSKY 1964), though not yet from Gambia.

Lebia sp.: Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Note: A single specimen of a *Lebia* (sensu lato) of the relationship of *L. melanura* DEJEAN, 1831, but not found in the collection of the Museum voor Midden Africa, Tervuren.

Microlestes africanus MATEU, 1959: Kiang West NP, Ranger Station, 17.10.1999, W. SCHACHT. - Distribution: Distributed through the northern half of sub-Saharan Africa (BASILEWSKY 1968), probably not yet recorded from Gambia.

Thyreopterus flavosignatus flavosignatus DEJEAN, 1831: Abuko NP, 13.10.1999, 19.10.1999, R. GRIMM. - Distribution: Very widely distributed in sub-Saharan Africa, including Senegal (BASILEWSKY 1968, 1969), but probably not yet recorded from Gambia.

Zolotarevskyella rhytidera (CHAUDOIR, 1876): Bakau env., 12.-25.10.1999, W. SCHACHT. - Distribution: Widely distributed through the northernmost part of sub-Saharan Africa, recorded from Mauritania (BASILEWSKY 1961a), Senegal (BASILEWSKY 1964, 1969), and Tschad (MATEU 1966), though not yet from Gambia.

Orthogoniini

Orthogonius senegalensis DEJEAN, 1831: Kolili, 6.-19.7.2000, R. GRIMM. - Distribution: West and Central African species (BASILEWSKY 1968), known from Senegal, though probably not yet recorded from Gambia.

Brachinini

Brachinus connectus connectus (DEJEAN, 1831): Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. Janjangbureh vic., 13.7.2000, R. GRIMM. - Distribution: According to LIEBKE (1934) widely distributed in northern Africa south of the Sahara, recorded from Senegal (BASILEWSKY 1950b, 1969), though not yet from Gambia.

Brachinus dorsalis DEJEAN, 1831: Janjangbureh vic., 13.7.2000, R. GRIMM. - Distribution: According to LIEBKE (1934) widely distributed in northern Africa south of the Sahara, recorded from Senegal (BASILEWSKY 1950b, 1969), though not yet from Gambia.

Pheropsophus parallelus parallelus (DEJEAN, 1825): Georgetown, 10.2002, K. HANDKE. - Distribution: According to BASILEWSKY (1962a) a West African and northern sub-Saharan species. Recorded from Senegal (BASILEWSKY 1969) and Mauritania (BASILEWSKY 1970), though not yet from Gambia.

Styphlomerus aulicus (DEJEAN, 1831): Abuko NP, 13.10.1998, W. SCHACHT. - Distribution: Widely distributed through the northern part of sub-Saharan Africa, recorded from Senegal (BASILEWSKY 1965, 1969), but probably not yet recorded from Gambia.

Styphlomerus exilis (LAFERTÉ, 1850): Abuko NP, 13.10.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999; W. SCHACHT. - Distribution: A West African species (BASILEWSKY 1968), recorded from Senegal (BASILEWSKY 1965, 1969), but probably not yet recorded from Gambia.

Styphlomerus ludicrus ludicrus (ERICHSON, 1843): Kiang West NP, Jalandi, 1.11.1998, W. SCHACHT. - Distribution: A West and Central African species (BASILEWSKY 1968), recorded from Senegal (BASILEWSKY 1965, 1969), but probably not yet recorded from Gambia.

Styphlomerus piccolo LIEBKE, 1927: Abuko NP, 13.10.1998, 30.10.1998; Kiang West NP, Ranger Station, 17.10.1999; Kiang West NP, Headquarter, 16.10.1999, W. SCHACHT. - Distribution: A very small species, well distinguished from *S. exilis* (LAFERTÉ) and *S. ludicrus* (ERICHSON). According to LIEBKE (1934) so far known from East Africa. New

for Gambia and generally for the whole of West Africa.

Styphlomerus near placidus (PERINGUEY, 1896): Abuko NP, 13.10.1998, W. SCHACHT. - Distribution: According to LIEBKE (1934) so far known from South Africa. - Note: I am not fully sure of the identity of the single available specimen with specimens of *S. placidus* from southern Africa, although the specimen from Gambia exactly matches body shape and elytral pattern of the latter.

Remarks

Altogether, 161 carabid species are recorded from Gambia in this paper, of which 6 cannot be exactly identified at present. Certainly, this is not the full species inventory of that country, because collecting visits were short, they did not cover the whole country, and mostly were carried out in the same season, namely during October and beginning of November, which in Gambia is just at the end of wet season. Although this is a good time for sampling ground beetles, because the ground is still wet and vegetation flourishes, collecting at onset of wet season, or during dry season might yield additional species.

Concerning the performed sampling methods, most material was collected by hand, while turning logs and stones, digging in the ground beneath tufts of grass or between roots, or by use of a net. At few occasions only (autumn 1998 and 1999) W. SCHACHT carried out some collecting at light, but no other methods (fogging, beating, sifting, exposing BARBER traps etc.) were performed. In view of the limited number of collecting methods carried out and as no collector was a specialist of ground beetles, the number of species recorded is surprisingly large.

In view of the restricted number of used sampling methods, however, naturally the set of recorded species is not fully representative for the fauna. This can be gathered from the table below that shows the representation of the recorded species in the various subfamilies. While tiger beetles, Harpalines, and Chlaeniines, for example, are quite well represented, Lebiines, Oodines, and even Bembidiines certainly are not. The most surprising deficiency is the absence of any Platynine species in the sample which might be well due to the failure of any collecting on foliage. However, the number of recorded tribes is quite large which, on the other hand, yet demonstrates a rather well balanced sampling.

Tab. 2. Species numbers according to tribes in the sample of Carabidae from Gambia.

tribe	species	Pterostichini	17	Odacanthini	4
Cicindelinae	12	Harpalini	33	Dryptini	1
Ozaenini	1	Amblystomini	6	Galeritini	1
Paussini	3	Panagaeini	3	Zuphiini	1
Carabini	1	Chlaeniini	14	Lebiini	9
Omophronini	1	Oodini	4	Orthogoniini	1
Scaritini	11	Masoreini	1	Brachinini	8
Cymbionotini	2	Tetragonoderini	4		
Bembidiini	19	Graphipterini	1		
Pogonini	2	Anthiini	1	total	161

The large number of new records for Gambia is not surprising because no serious collecting work on carabid beetles was carried out ever in this country. However, most species have been recorded from either Senegal or Mauritania, and these obviously should occur also in Gambia. Some more important records refer to species that either apparently are rare, or are believed to occur rather south, or have been recorded only from East Africa: *Geodromus dumolinii* DEJEAN, 1829, was described from Senegal, but apparently was never recaptured in West Africa since description; *Scarites edentatus* BÄNNINGER, 1932 and *Styphlomerus piccolo* LIEBKE, 1927 which both were hitherto recorded only from East Africa; *Cymbionotum rufotestaceum* (FAIRMAIRE, 1893), *Elaphropus nigrutilus* BURGEON, 1935, *Tachys testaceus* (BASILEWSKY, 1953), *Abacetus brunneus* STRANEO, 1939, *Melanchiton parallelus* (CHAUDOIR, 1883) which were not yet found as far north.

Only one of the mentioned species, namely the unique new *Lymnastis schachti* sp. nov., is (so far) endemic to Gambia which is not surprising in view of the small size of this country. Moreover, in a biogeographical sense, the term "Senegambia" is fairly well founded, because this area is very homogenous with respect to edaphic, climatic, and floral conditions. It is well known that the majority of the West African Carabidae, especially those that occur in the steppe to savannah zone between the Sahara desert in the north and the wet savannah or rain forest grown tropics in the south, occupy more or less the whole belt of dry savannah and possess rather extended ranges. So, the sample mentioned here more or less well represents this West African carabid faunal element.

More generally spoken, it is a genuine African fauna, because but very few palearctic elements occur. Most of these are hygrophilous or even halophile species of river and sea shores. On the other hand, apart from some species that possess almost Africa-wide ranges, it is a decidedly non-tropical, West African savannah fauna.

I estimate the number of species to occur in Gambia at least twice as large as the present sample. To verify this number, however, much more extended and scrutinized sampling would be needed, in particular by carrying out more diverse sampling methods, but also by repeated collecting in different seasons or even throughout the year.

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Address of author:

Dr. Martin BAEHR
 Zoologische Staatssammlung
 Münchhausenstrasse 21
 D-81247 München
 Germany
 e-mail: martin.baehr@zsm.mwn.de

Literaturbesprechung

NIJMAN, V. 2002: Forest (and) Primates. Conservation and ecology of the endemic primates of Java and Borneo. - Tropenbos International, Wageningen. 232 S.

Die Sunda-Region Indonesiens ist bezüglich der Primaten eine der artenreichsten Gegenden der Welt, beheimatet sie doch je nach systematischem Stand 18 bis 20 endemische Arten. Die großen Inseln Java und Borneo beherbergen dabei 3 bzw. 5 Endemiten, 6 davon sind Languren, die restlichen beiden sind Gibbons. Das Überleben der meisten dieser endemischen Primaten hängt vom natürlichen Regenwald ab, der allerdings in dieser Region rapide zusammenschrumpft. Der Autor hat sich in seiner Doktorarbeit bemüht, Daten von 1994 bis 2001 zusammenzutragen, zu analysieren und diskutieren. Dieses Buch stellt quasi die Druckform der Dissertation dar, ergänzt durch einige Ko-Autorenschaften. Der erste Teil der Studie befasst sich überwiegend mit dem Testen von Zählmethoden und dem Vergleich dieser Ergebnisse aus unterschiedlichen Untersuchungsgebieten. Teil 2 stellt die endemischen Primaten Javas - *Presbytis comata* (Mützenlangur) und *Trachypithecus auratus* (Java-Langur) vor, und beinhaltet eine faunistische Übersicht der Dieng Mountains in Zentraljava. Teil 3 enthält zwei Arbeiten über *Nasalis larvatus* (Nasenaaffe) und eine über Verbreitungsmuster der Primatendiversität in Borneo. Eine Neubewertung des IUCN Schutzstatus der endemischen Primaten Javas und Borneos sowie eine abschließende Diskussion sind Inhalt von Teil 4. Ein englisches, indonesisches und holländisches summary und eine umfangreiche Publikationsliste beschließen diesen Band.

R. GERSTMEIER

DE WAAL, F. 2002: Der Affe und der Sushimeister. Das kulturelle Leben der Tiere. - Carl Hanser Verlag, München. 392 S.

Der bekannte Primatenforscher Frans DE WAAL ("Bonobos") versucht in diesem Buch, die strikte Grenzziehung zwischen Menschen und Tieren im westlichen Denken aufzuweichen. Dass Tiere womöglich eine Kultur haben, ist das zentrale Thema, dem der Autor nachgeht. Geprägt durch zahlreiche Aufenthalte in Japan verdeutlicht er die "östliche Denkweise" japanischer Tierforscher, die Tiere eigentlich von Anfang an als "Kulturwesen" betrachteten; für sie gab es nie die scharfe Grenzziehung Mensch - Tier. Die früher bei westlichen Wissenschaftlern verpönte "Individualisierung" der Forschungsobjekte (Namen geben oder Tiere gar füttern) hat sich dank des Vorsprungs der japanischen Ethologie schon seit längeren gelegt - wir sind bereit zu lernen (gleichfalls eine Natur- wie Kultureigenschaft des Menschen und der Tiere). Menschen lernen bereitwilliger, intensiver und exakter als jedes andere Lebewesen. Diese Tatsache führt zum Vergleich mit dem "Sushimeister"; seine Ausbildung (als Lehrling) erfolgt im wesentlichen passiv (durch Zusehen), also dem Gegenteil von Nachahmung. Dass die menschliche Kultur einzigartig ist, steht außer Zweifel; Frans de Waal will vielmehr zeigen, dass auch Tiere in Kulturen leben, die allen Definitionen dieses Begriffes genügen, wie Lernen, Werkzeuggebrauch, Symbole, Spiel, Weitergabe von Wissen und sogar regionale Dialekte. Die Beispiele die der Autor aus der Tierwelt präsentiert sind vielfältig, wenn auch primatenlastig, was keinesfalls stört. Viele sind durchaus nicht neu (wie z.B. das Waschen von Süßkartoffeln bei japanischen Makaken und ihr "Würzen" mit Meerwasser), aber der Autor versteht es trotzdem, den Leser in seinen Bann zu ziehen und er lässt keine Fragen und Details aus.

So entsteht ein Panorama der Verhaltensforschung des 20. Jahrhunderts und eine "Rehabilitierung" der einführenden Weise Konrad Lorenz (zumindest was die Tiere betrifft).

Eine überaus empfehlenswerte, informative und komplexe Darstellung zum kulturellen Leben der Tiere.

R. GERSTMEIER

GLENN, M.E. & CORDS, M. (eds) 2002: *The Guenons. Diversity and Adaptation in African Monkeys*. - Kluwer Academic/Plenum Publishers, New York. 438 S.

"Guenons" ist die Bezeichnung für Meerkatzen des Tribus Cercopithecini, deren Vertreter mit 4-5 Gattungen (*Allenopithecus*, *Miopithecus*, *Erythrocebus*, *Cercopithecus*, *Chlorocebus*) endemisch in Afrika südlich der Sahara vorkommen. Sie besetzen eine große Bandbreite an Habitaten, die sich von Waldland über Mangrovenwälder, Sumpfwälder bis hin zu Bambuswäldern, Bergwäldern und alpinen Hochmooren (in 4500 m Höhe) erstrecken.

Die Idee zu diesem Buch entsprang einem 2-tägigen Symposium während des Kongresses der Internationalen Primatengesellschaft 2001 in Adelaide. Der Erfolg war so groß, dass die Herausgabe dieses Buches beschlossen wurde; 49 Autoren haben sich an diesem Werk beteiligt. Die Themen dieses Bandes sind in vier Kategorien organisiert. Kapitel 1 ("Evolutionary Biology and Biogeography") steigt mit der schwierigen Taxonomie dieser Gruppe ein. In den letzten 15 Jahren haben sich im wesentlichen sechs Autoren mit der Klassifikation auseinandergesetzt, mit dem allerdings noch unbefriedigenden Ergebnis, dass die Artenzahlen zwischen 23 und 36 schwanken. Genetische und molekularbiologische Analysen stehen bei den Cercopithecini erst am Anfang und lassen vielversprechende taxonomische und phylogenetische Ergebnisse erwarten; im Prinzip das gleiche gilt für moderne biogeographische Ansätze.

Der zweite Teil ist am umfangreichsten und behandelt das Verhalten einzelner Arten. Jeweils drei Beiträge bestreiten die Kapitel 3 (Ecology) und 4 (Conservation).

Viele neue Aspekte werden in diesem spannenden Band beschrieben und es wird deutlich, dass man diesen Primaten bisher viel zu wenig Beachtung hinsichtlich ihres Verhaltens, ihrer Ökologie und ihrer phylogenetischen Diversität geschenkt hat.

R. GERSTMEIER

Druck, Eigentümer, Herausgeber, Verleger und für den Inhalt verantwortlich:

Maximilian SCHWARZ, Konsulent für Wissenschaft der O.Ö. Landesregierung,
Eibenweg 6, A-4052 Anselden, e-mail: maxschwarz@everyday.com

Redaktion: Erich DILLER (ZSM), Münchhausenstrasse 21, D-81247 München, Tel.(089)8107-159

Fritz GUSENLEITNER, Lungitzerstrasse 51, A-4222 St. Georgen / Gusen

Wolfgang SCHACHT, Scherrerstrasse 8, D-82296 Schöngeising, Tel. (089) 8107-146

Erika SCHARNHOP, Himbeerschlag 2, D-80935 München, Tel. (089) 8107-102

Johannes SCHUBERTH, Bauschingerstrasse 7, D-80997 München, Tel. (089) 8107-160

Emma SCHWARZ, Eibenweg 6, A-4052 Anselden

Thomas WITT, Tengstrasse 33, D-80796 München

Postadresse: Entomofauna (ZSM), Münchhausenstrasse 21, D-81247 München, Tel.(089) 8107-0,

Fax (089) 8107-300, e-mail: erich.diller@zsm.mwn.de oder: wolfgang.schacht@zsm.mwn.de

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