

Noteridae and Dytiscidae of the Comoé National Park, Ivory Coast, West Africa

(Coleoptera: Noteridae, Dytiscidae)

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Abstract

Aquatic beetles in the families Noteridae and Dytiscidae have been collected from aquatic habitats and at light in the southern part of the Comoé National Park (Ivory Coast, West Africa). A total of 12 species of Noteridae in four genera and 95 species of Dytiscidae in 22 genera are recorded; 30 species are reported for the first time from the Ivory Coast. An annotated list of species is presented. Based on literature data the distribution for each species is given, and African records with emphasis on West Africa are listed. Species richness in Comoé National Park is discussed.

Key words: Coleoptera, Dytiscidae, Noteridae, faunistics, Comoé National Park, Ivory Coast, West Africa, savannah.

Introduction

Although considerable efforts have been undertaken on the taxonomy of Afrotropical water beetles of the families Noteridae and Dytiscidae, their faunistics are relatively unknown. The last comprehensive revision of these families in Africa (GUIGNOT 1959a, 1959b, 1961b) gives the species distribution as known by the end of the 1950s. However, more detailed information on the distribution is indicated only for the less widespread species.

Regional species lists on Noteridae and Dytiscidae in West African countries were elaborated more or less extensively for Mauritania (DEKEYSER & VILLIERS 1956; GUIGNOT 1952a, 1955a), Senegal (GUIGNOT 1956b, 1961a; LEGROS 1972), Sierra Leone (FRANCISCOLO & SANFILIPPO 1986, 1990), Guinea Bissau (NILSSON et al. 1995), Burkina Faso and Mali (GUIGNOT 1943), Guinea (GUIGNOT 1955b; LEGROS 1954, 1958), Benin and Togo (GUIGNOT 1952b), and Nigeria (MEDLER 1980).

Among West African countries the Ivory Coast has received considerable attention from taxonomists working on Noteridae and Dytiscidae. Data on the faunistics of Noteridae and Dytiscidae of the Ivory Coast are given by BILARDO & PEDERZANI (1978), FORGE (1979) and GUIGNOT (1943) and are distributed in systematic or taxonomic publications (among others BILARDO & PEDERZANI 1979; BISTRÖM 1979b, 1982, 1983c, 1985, 1986, 1987b, 1988b, 1988c, 1988d, 1996a; GUIGNOT 1959a, 1959b, 1961b).

Since 1998 the author has worked in the Comoé National Park, northern Ivory Coast, collecting data on the faunistics and ecology of water beetles. A preliminary list of species that had not yet been reported from the Ivory Coast was published by REINTJES & PEDERZANI (2002). In the following paper, all the species collected during the study in Comoé National Park are listed. Faunistic information on the known distribution of the species is gathered from the literature. Species richness of Dytiscidae and Noteridae in Comoé NP is discussed.

Study sites

The Comoé National Park ($08^{\circ}3'$ - $09^{\circ}4'N$, $003^{\circ}1'$ - $04^{\circ}3'W$) covers 11,500 km² at an altitude of about 250 m a.s.l. and comprises different vegetational zones from Guinea savannah in the south to Sudan savannah in the north (POILECOT 1991). The climate is characterised by a long dry season from about November to March/April, a mean annual precipitation of 950 mm and an annual average temperature between 25°C and 28°C (LINSENMAIR 1998). Vegetation on the ferruginous soil is of savannah-type interspersed with forest islands, while riverine forest borders the large rivers (POREMBSKI 1991). The longest Ivorian river, the Comoé (1,160 km) runs for 230 km from north to south through the park. During the rainy season the park is drained by a few rivers and numerous creeks and savannah ponds of variable sizes are abundant. Towards the end of the dry season flow often ceases even in the Comoé River. The other rivers and creeks desiccate to a great extent or entirely like virtually all the ponds (RÖDEL 2000).

Different types of aquatic habitats in the south-west of the National Park were sampled. Most specimens reported on here derive from rockpools in the riverbed of the permanent Comoé River (Crp). Further material was sampled in the Kongo River (KR) and the Lola Creek (LC). The former is one of the major tributaries of the Comoé River and is bordered by narrow gallery forest. The latter drains directly into the Comoé River and has open shrub vegetation along its banks. Additional beetles derive from the main water body of the Comoé River (Coc, Cc), as well as from several temporary ponds in the savannah (PondA-C, PondF, PondH, PondK-L, PondN-P) and gallery forest (Ponde). Moreover, material from a temporary pond on an Inselberg (PondG), from a (in most years) permanent pond (PondQ) and from artificial savannah ponds (ArtA-B) is included. Light trapping near Lola Creek (LC-lt), Kongo River (KR-lt), Comoé River (Cc-lt) and PondB (PondB-lt) yielded additional material. Note, that abbreviations of the water bodies were partly changed compared to REINTJES & PEDERZANI (2002): L to LC, K to KR, Ssp to PondC, Srp split into PondG and PondK.

Material and methods

Beetles were collected from 1998 to 2001 during the dry season and the beginning of the rainy season. For sampling of the beetles in the rockpools of the Comoé River, the pools were entirely emptied, pouring the water through a net (mesh size 500 µm). In the other habitats the beetles were caught with dipnets (mesh size 500 µm and 1 mm) or funnel traps.

Species identification followed the most recent revisions. The nomenclature is according to NILSSON (2001). For each genus of Dytiscidae the rough geographical distribution and the number of species within the genus are cited from NILSSON (2001), who applies the following zoogeographical regions: Afrotropical (AF), Australian (AU), Nearctic (NA), Neotropical (NT), Oriental (OR), Pacific (PC) and Palearctic (PL). The latest revision covering the genus or at least the African portion is given for each genus.

In order to facilitate retrieval of species within a genus, the species are arranged alphabetically. For every species of Dytiscidae the geographical distribution is cited from NILSSON (2001). Moreover, it is mentioned, if type material derives from the Ivory Coast. For further discussion of species distribution, West Africa is defined as the region south of the Sahara from Mauritania and Senegal to Niger and Nigeria. Published records for West Africa are cited and supplemented by records from other African regions, particularly from Central and Eastern Africa. The basis of this list are faunistic publications and scattered informations in taxonomic papers. Neither were all determinations checked, nor does this list claim to be complete, particularly for regions outside West Africa. Species are considered new to the Ivory Coast, if no respective records were found in the comprehensive literature study. All species that

had been listed as new to the Ivory Coast elsewhere (particularly in REINTJES & PEDERZANI 2002) and were based on the material collected in this study, are listed here again.

Determinations of the species recorded here were spot checked by O. Biström (OB), A.N. Nilsson (AN) or F. Pederzani (FP). The number of specimens checked, locality and month/year of sampling as well as the taxonomists involved are given in abbreviations for each species. It must be emphasized, that additional material was collected and therefore, only limited conclusions on abundance and habitat should be drawn from these informations.

A collection of all species cited here is deposited in the Natural History Museum Vienna. Additional specimens remain in the private collection of the author.

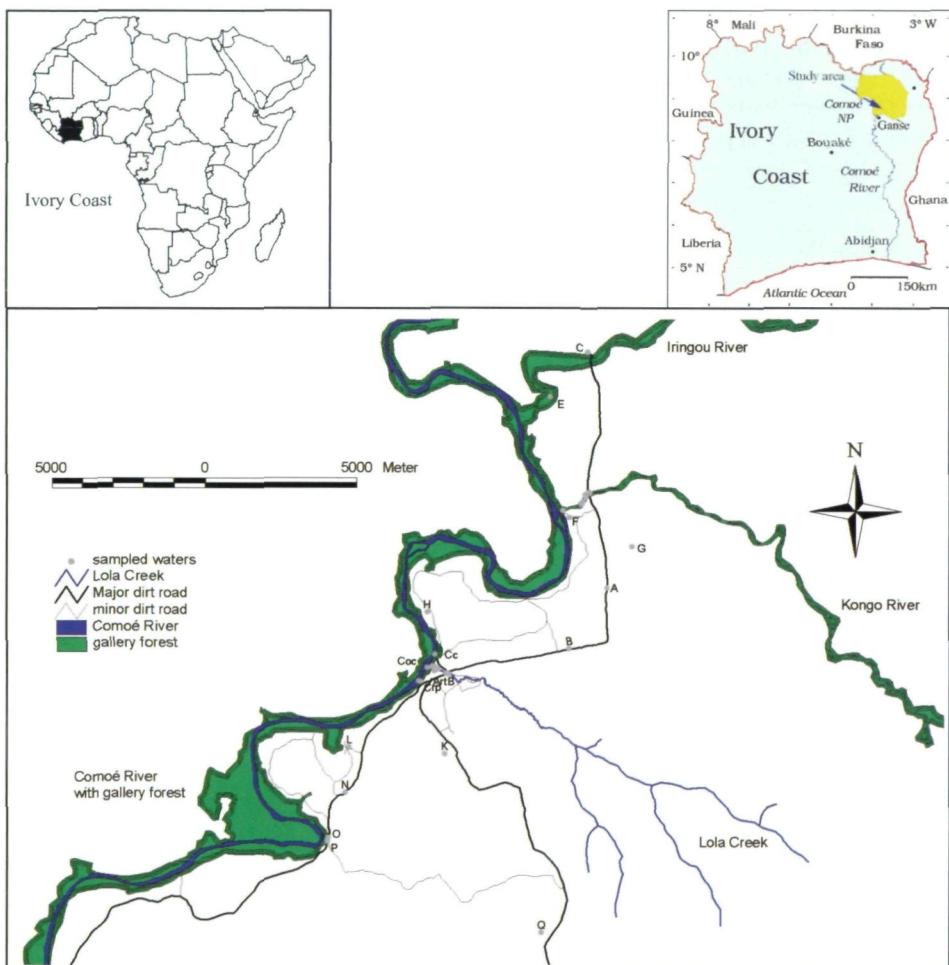


Fig. 1: Map of the study site.

Results

NOTERIDAE

***Hydrocoptus* MOTSCHULSKY, 1859**

Zoogeographical regions: AF AU OR; number of species: 17; latest revision: GUIGNOT (1959a)

***Hydrocoptus koppi* WEHNCKE, 1883**

Material examined by specialists: 2 exs. LC 1/1999, 3 exs. LC 4/1999, 1 ex. LC-lt 5/1999, 31 exs. PondA 4/1999, 2 exs. Ponda 5/1999, 4 exs. 1/1999 and 1 ex. 5/1999 PondB, 3 exs. PondF 5/1999, det. FP

Senegal (GUIGNOT 1961a); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Sudan (GUIGNOT 1959a); Guinea (LEGROS 1958); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Nigeria (MEDLER 1980); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978); Democratic Republic of the Congo (GUIGNOT 1959a).

***Hydrocoptus uellensis* GUIGNOT, 1953**

Material examined by specialists: 2 exs. LC 12/1998, 2 exs. LC-lt 2/1999, 5 exs. PondA 4/1999, 2 exs. PondB 5/1999, det. FP

Senegal (GUIGNOT 1961a); Nigeria (MEDLER 1980); Democratic Republic of the Congo (GUIGNOT 1959a). Reported as *Hydrocoptus angolensis* PECHET, 1925 from Gabon and Ivory Coast (BILARDO & PEDERZANI 1978, correction based on F. Pederzani, pers. comm.).

***Synchortus* SHARP, 1880-1882**

Zoogeographical regions: AF; number of species: 8; latest revision: GUIGNOT (1959a)

***Synchortus simplex* SHARP, 1882**

Material examined by specialists: 2 exs. LC 4/1999, 2 exs. LC 5/1999, det. FP

Sudan (GUIGNOT 1959a); Nigeria (MEDLER 1980). New to the Ivory Coast.

***Synchortus sparsus* SHARP, 1882**

Material examined by specialists: 2 exs. KR-lt 2/1999, 1 ex. KR-lt 3/1999, 1 ex. PondB 2/1999, 1 ex. PondB 5/1999, 1 ex. PondF 5/1999, det. FP

Mauritania, Niger, Sudan, Democratic Republic of the Congo (GUIGNOT 1959a); Senegal (GUIGNOT 1956b); Gambia (LEGROS 1972); Ivory Coast, Gabon (BILARDO & PEDERZANI 1978); Benin (GUIGNOT 1952b).

***Canthydrus* SHARP, 1880-1882**

Zoogeographical regions: AF OR NT AU; number of species: approx. 60; latest revision: GUIGNOT (1959a)

***Canthydrus bisignatus* WEHNCKE, 1883**

Material examined by specialists: 4 exs. Crp 3/1999, det. FP; 1 ex. KR 4/1998 det. AN

Democratic Republic of the Congo (GUIGNOT 1959a); Guinea (LEGROS 1958); Ivory Coast (GUIGNOT 1943); Nigeria (MEDLER 1980); Gabon (BILARDO & PEDERZANI 1978).

***Canthydrus irenicus* GUIGNOT, 1955**

Material examined by specialists: 1 ex. KR 2/1999, 1 ex. LC 12/1998, 1 ex. LC 1/1999, det. FP

Senegal, Ivory Coast (GUIGNOT 1955c); Guinea (ROCCHI 2000). Type material from Toumodi, Ivory Coast.

***Canthydrus koppi* WEHNCKE, 1883**

Material examined by specialists: 1 ex. Crp 2/1999, det. FP

Senegal (GUIGNOT 1959a, 1961a; LEGROS 1972); Mauritania (GUIGNOT 1955a); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Nigeria (MEDLER 1980). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Canthydrus xanthinus* RÉGIMBART, 1895**

Material examined by specialists: 1 ex. KR 3/1998, 1 ex. KR 4/1998, det. AN; 4 exs. Crp 3/1999, 1 ex. LC 4/1999, det. FP

Mauritania, Mali, Sudan, Benin, Democratic Republic of the Congo, Uganda (GUIGNOT 1959a); Senegal (GUIGNOT 1959a; LEGROS 1972); Burkina Faso (GUIGNOT 1943); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Guinea (LEGROS 1958); Ivory Coast (BILARDO & PEDERZANI 1978); Nigeria (MEDLER 1980).

***Hydrocanthus* SAY, 1825**

Zoogeographical regions: AF NA OR AU; number of species: 38; latest revision: GUIGNOT (1959a)

***Hydrocanthus carbonarius* GUIGNOT, 1936**

Material examined by specialists: 3 exs. Crp 3/1999, det. FP

Senegal, Burkina Faso, Guinea (GUIGNOT 1959a); Ivory Coast (FORGE 1979; GUIGNOT 1959a); Nigeria (MEDLER 1980).

***Hydrocanthus grandis* (LAPORTE DE CASTELNAU, 1834)**

Material examined by specialists: 2 exs. LC-lt 5/1999, det. OB

Mauritania (GUIGNOT 1955a); Senegal (GUIGNOT 1956b); Burkina Faso (GUIGNOT 1943); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Guinea (LEGROS 1954); Ivory Coast (BILARDO & PEDERZANI 1978); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978); Democratic Republic of the Congo (GUIGNOT 1959a).

***Hydrocanthus micans* WEHNCKE, 1883**

Material examined by specialists: 1 ex. LC 4/1998, 1 ex. LC-lt 4/1998, det. AN; 5 exs. Crp 3/1999, det. FP

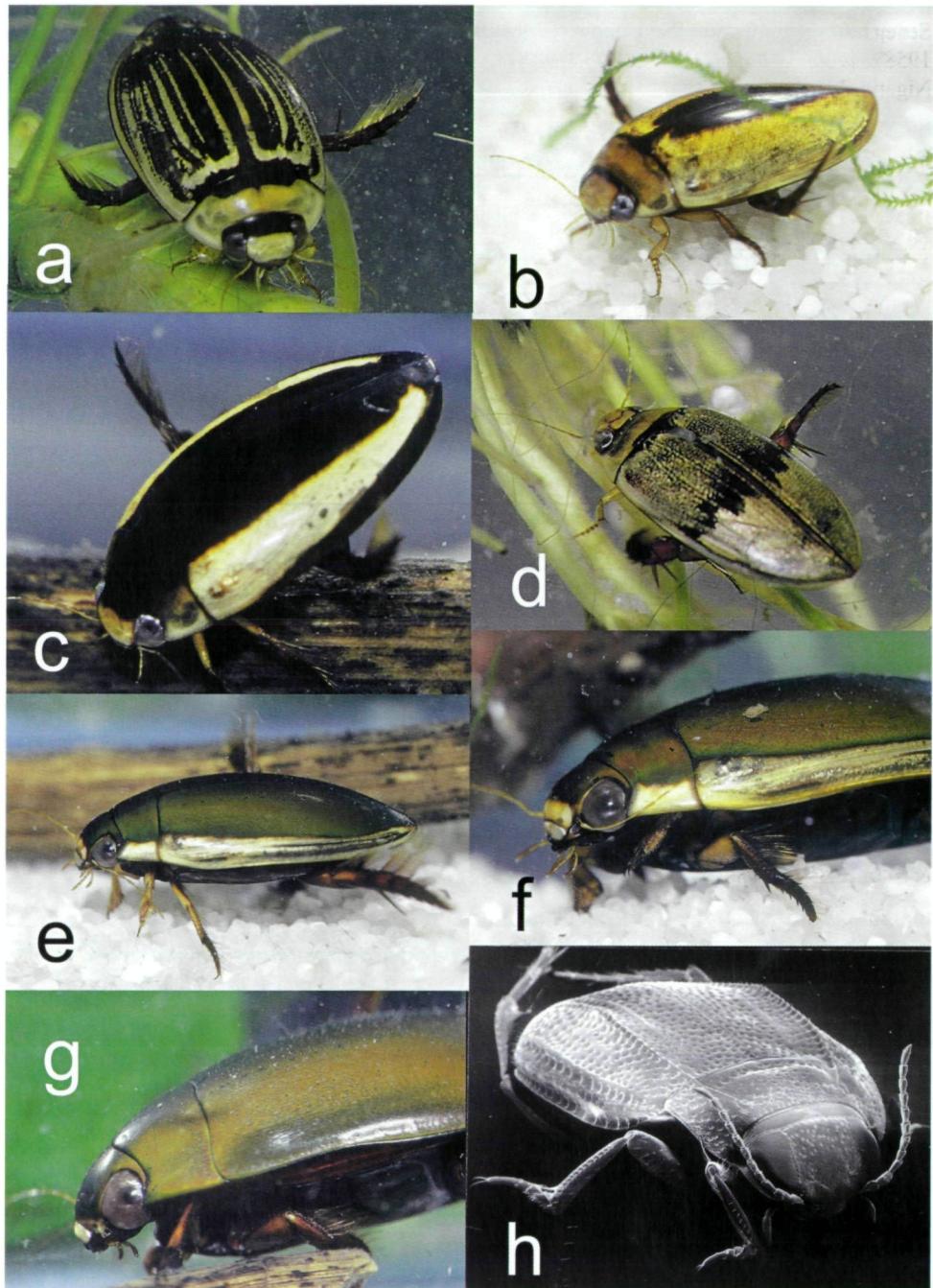


Fig. 2: Photographs of some of the species recorded in Comoé National Park; a) *Hydaticus flavolineatus* (18.0-20.5 mm); b) *Hydaticus dorsiger* (11.0-14.5 mm); c) *Hydaticus exclamationis* (13-15 mm); d) *Hydaticus matriuelis* (11.0-14.2 mm); e) *Cybister senegalensis* (17-21 mm); f) *Cybister tripunctatus* (23-32 mm); g) *Cybister mocquerysi* (28-32 mm); h) *Yola nigrosignata* (2.3-2.8 mm). Body lengths cited from BISTRÖM (1983c) and GUIGNOT (1961b).

Senegal (GUIGNOT 1956b; LEGROS 1972); Burkina Faso (GUIGNOT 1943); Guinea (LEGROS 1958); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Gabon (BILARDO & PEDERZANI 1978).

Hydrocanthus parvulus GSCHWENDTNER, 1930

Material examined by specialists: 1 ex. KR-It 3/1999, det. FP

Nigeria (MEDLER 1980); Cameroon, Democratic Republic of the Congo, Zimbabwe (GUIGNOT 1959a). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

DYTISCIDAE

Copelatus ERICHSON, 1832

Zoogeographical regions: AF AU NA NT OR PL; number of species: 468; latest revision: GUIGNOT (1961b) and NILSSON et al. (1996)

Copelatus crassus RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 1 ex. ArtB 3/1999, 2 exs. ArtB 4/1999, det. FP

Senegal, Mali, Ivory Coast, Democratic Republic of the Congo, Uganda (GUIGNOT 1961b); Guinea Bissau (NILSSON et al. 1995).

Copelatus epactus GUIGNOT, 1948

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC-It 2/1999, det. FP

Democratic Republic of the Congo (GUIGNOT 1961b). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

Copelatus erichsonii GUÉRIN-MÉNEVILLE, 1849

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. KR 3/1998, 1 ex. KR 5/1998 det. AN

Cape Verde, Democratic Republic of the Congo (GUIGNOT 1961b); Ethiopia (GUIGNOT 1961b; NILSSON & PERSSON 1993); Ivory Coast (FORGE 1979).

Copelatus nigrostriatus RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 7 exs. KR 2/1999, 3 exs. KR 3/1999, 4 exs. PondE 4/1999, det. FP

Guinea Bissau (NILSSON et al. 1995); Ivory Coast (BILARDO & PEDERZANI 1978); Nigeria (GUIGNOT 1961b; MEDLER 1980); Togo, Benin, Gabon, Democratic Republic of the Congo, Angola (GUIGNOT 1961b).

Copelatus sylvaticus GUIGNOT, 1952

Zoogeographical regions: AF

Material examined by specialists: 1 ex. KR 5/1998, 2 exs. KR 4/1998, det. AN; 3 exs. PondB-It 4/1999, det. FP

Senegal (GUIGNOT 1956b); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Cameroon (BILARDO 1982; GUIGNOT 1961b); Gabon (BILARDO & PEDERZANI 1978); Democratic Republic of the Congo, Uganda (GUIGNOT 1961b).

Copelatus togoensis RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 1 ex. KR 4/1998, 1 ex. KR 5/1999, det. AN; 1 ex. KR 1/1999, 2 exs. KR 2/1999, det. FP

Guinea Bissau (NILSSON et al. 1995); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Nigeria (MEDLER 1980); Guinea, Togo, Benin, Democratic Republic of the Congo, Uganda (GUIGNOT 1961b).

Rhantaticus SHARP, 1882

Zoogeographical regions: AF AU OR PL; number of species: 1; latest revision: GUIGNOT (1961b)

Rhantaticus congestus (KLUG, 1833)

Zoogeographical regions: AF AU OR PL

Material examined by specialists: 2 exs. KR 4/1998, det. AN; 1 ex. Crp 2/1999, 1 ex. Crp 3/1999, det. FP

Mauritania (DEKEYSER & VILLIERS 1956; GUIGNOT 1952a); Senegal (LEGROS 1972; NILSSON 2001); Mali, Burkina Faso (GUIGNOT 1943); Niger (GUIGNOT 1950); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Sudan (BISTRÖM 1979a); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978); Madagascar (NILSSON 2001).

Cybister CURTIS, 1827

Zoogeographical regions: AF AU NA NT OR PL; number of species: 102; latest revision: GUIGNOT (1961b)

Cybister bimaculatus AUBÉ, 1838

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. PondB 6/2000, det. FP

Senegal, Guinea, Democratic Republic of the Congo (GUIGNOT 1961b); Ivory Coast (FORGE 1979); Nigeria (MEDLER 1980; OMER-COOPER 1967).

Cybister buqueti AUBÉ, 1838

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondK 4/2000, det. FP

Senegal, Mozambique (GUIGNOT 1961b); Uganda, Democratic Republic of the Congo, Sudan, Zimbabwe (OMER-COOPER 1965). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

Cybister gschwendtneri GUIGNOT, 1935

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondB 4/1999, det. FP

Mauritania (DEKEYSER & VILLIERS 1956; GUIGNOT 1952a); Mali, Burkina Faso (GUIGNOT 1943); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (OMER-COOPER 1965); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Uganda, Tanzania, Angola, Mozambique (NILSSON 2001).

Cybister immarginatus (FABRICIUS, 1794)

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondH 4/2001, 1 ex. PondQ 2/2001, det. FP

Senegal, Democratic Republic of the Congo (GUIGNOT 1961b); Guinea Bissau (NILSSON et al. 1995); Nigeria (MEDLER 1980); Guinea, Togo, Ivory Coast, Cameroon, Kenya, Tanzania (incl. Zanzibar), Democratic Republic of the Congo, Angola, Mozambique, South Africa (OMER-COOPER 1965).

Cybister marginicollis BOHEMAN, 1848

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC-It 3/1999, det. FP

Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON 2001; NILSSON et al. 1995); Guinea (LEGROS 1954); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978; NILSSON 2001); Tanzania, South Africa, Mozambique, Madagascar (NILSSON 2001).

Cybister mocquerysi RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondC 5/2000, 1 ex. PondK 6/2000, det. FP

Nigeria (MEDLER 1980); Mali, Guinea, Sierra Leone, Democratic Republic of the Congo, Mozambique (GUIGNOT 1961b). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

Cybister senegalensis AUBÉ, 1838

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. KR 3/2000, det. FP

Senegal (LEGROS 1972); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Nigeria (MEDLER 1980); Gabon (GUIGNOT 1961b). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

Cybister tripunctatus (OLIVIER, 1795)

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondK 6/2000, det. FP

Senegal (LEGROS 1972); Niger (GUIGNOT 1950); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (FORGE 1979); Nigeria (MEDLER 1980); Gabon (BILARDO & PEDERZANI 1978).

Cybister vicinus ZIMMERMANN, 1917

Zoogeographical regions: AF

Material examined by specialists: 1 ex. light at camp 3/1999, det. FP

Senegal (LEGROS 1972); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (FORGE 1979); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978); Uganda, Kenya, Tanzania, Zambia, Zimbabwe, Botswana, Mozambique, Swaziland, South Africa (BISTRÖM 1983b).

***Cybister vulneratus* KLUG, 1834**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. LC 3/1999, 1 ex. PondK 4/2000, det. FP

Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Nigeria (MEDLER 1980); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978).

***Cybister zimmermanni* MOUCHAMPS, 1957**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondK 4/2000, 1 ex. PondQ 2/2001, det. FP

These specimens had been identified as *C. nigroolivaceus* ZIMMERMANN, 1928, sensu GUIGNOT 1961b (nec *C. smaragdinus* Régimbart, 1895 sensu MOUCHAMPS, 1957) and the record was published by REINTJES & PEDERZANI (2002). Further study showed that the specimens belong to *C. zimmermanni*.

Ivory Coast (MOUCHAMPS 1957).

***Eretes* LAPORTE DE CASTELNAU, 1833**

Zoogeographical regions: AF AU NA NT OR PL; number of species: 4; latest revision: MILLER (2002)

***Eretes griseus* (FABRICIUS, 1781)**

Zoogeographical regions: AF OR PL

Material examined by specialists: 2 exs. KR 4/1998, det. AN; 1 ex. Crp 2/1999, det. FP.

The specimens were reported as *Eretes sticticus* (LINNAEUS, 1767) sensu GUIGNOT 1961b (REINTJES & PEDERZANI 2002). Following the recent revision, they are assigned to *E. griseus*.

Mauritania (DEKEYSER & VILLIERS 1956; GUIGNOT 1952a, 1955a); Cape Verde (NILSSON 2001); Senegal (LEGROS 1972); Burkina Faso (GUIGNOT 1943); Niger (GUIGNOT 1950); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Sudan (BISTRÖM 1979a; NILSSON 2001); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Nigeria (MEDLER 1980); Madagascar, Mauritius (BISTRÖM 1979a). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Hydaticus* LEACH, 1817**

Zoogeographical regions: AF AU NA NT OR PC PL; number of species: 135; latest revision: GUIGNOT (1961b)

***Hydaticus bivittatus* LAPORTE DE CASTELNAU, 1835**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. Crp 3/1999, 1 ex. PondO 4/2000, det. FP

Senegal (GUIGNOT 1956b; NILSSON 2001; OMER-COOPER 1965); Burkina Faso (GUIGNOT 1943); Sudan (BISTRÖM 1979a); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Nigeria (MEDLER 1980). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Hydaticus dorsiger* AUBÉ, 1838**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. LC-lt 4/1998, det. AN; 1 ex. Crp 2/1999, det. FP

Senegal (GUIGNOT 1961b; LEGROS 1972); Mali, Burkina Faso, Niger (GUIGNOT 1943); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Guinea (GUIGNOT 1961b); Ivory Coast (FORGE 1979; GUIGNOT 1943); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980).

***Hydaticus exclamationis* AUBÉ, 1838**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. Crp 2/1999, det. FP

Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Guinea (LEGROS 1954; LEGROS 1958); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Gabon (BILARDO & PEDERZANI 1978).

***Hydaticus flavolineatus* BOHEMAN, 1848**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. KR 3/2000, det. FP

Senegal (GUIGNOT 1956b); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (FORGE 1979); Nigeria (MEDLER 1980).

***Hydaticus leander* (ROSSI, 1790)**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. PondQ 4/2001, 1 ex. PondN 2/2001, det. FP

Mauritania (GUIGNOT 1955a); Senegal (LEGROS 1972); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980). New to the Ivory Coast.

***Hydaticus matruelis* CLARK, 1864**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. LC-lt 4/1998, det. AN; 1 ex. Crp 2/1999, det. FP

Niger (NILSSON 2001); Ethiopia (NILSSON & PERSSON 1993); Guinea (LEGROS 1954; LEGROS 1958); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978); Democratic Republic of the Congo, Zimbabwe (NILSSON 2001).

***Hydaticus vitticollis* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondQ 2/2001, 1 ex. 6/2000 PondO, det. FP

Senegal (NILSSON 2001); Guinea (LEGROS 1954); Ivory Coast (FORGE 1979); Nigeria (MEDLER 1980); Cameroon, Democratic Republic of the Congo, Tanzania (GUIGNOT 1961b).

***Bidessus* SHARP, 1882**

Zoogeographical regions: AF PL; number of species: 50; latest revision: BISTRÖM (1985)

***Bidessus pergranulum* BISTRÖM, 1985**

Zoogeographical regions: AF

Material examined by specialists: 3 exs. Crp 3/1999, det. OB

Senegal, Guinea, Ivory Coast, Nigeria, Gabon, Democratic Republic of the Congo, Tanzania (BISTRÖM 1985); Guinea Bissau (NILSSON et al. 1995); Central African Republic (BISTRÖM 1988a).

***Bidessus sodalis* GUIGNOT, 1939**

Zoogeographical regions: AF

Material examined by specialists: 2 exs. Crp 3/1999, 2 exs. LC 4/1998, det. OB

Mali, Burkina Faso, Chad, Sudan, Ghana, Nigeria, Cameroon, Democratic Republic of the Congo, Tanzania, Malawi (BISTRÖM 1985); Gambia, Uganda (BISTRÖM & SANFILIPPO 1986); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (OMER-COOPER 1979); Central African Republic (BISTRÖM 1988a); Ethiopia (NILSSON & PERSSON 1993).

***Bidessus toumodiensis* GUIGNOT, 1939**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. Crp 3/1999, det. OB

Ivory Coast, Ghana, Nigeria, Cameroon, Democratic Republic of the Congo, Tanzania, Zimbabwe (BISTRÖM 1985); Ethiopia (BISTRÖM 1988a; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Liberia, Angola (BISTRÖM 1988a). Type material from Toumodi, Ivory Coast.

***Clypeodytes* RÉGIMBART, 1894**

Zoogeographical regions: AF AU OR PL; number of species: 36; latest revision: BISTRÖM (1988d)

***Clypeodytes bedeli* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 7 exs. Crp 3/1999, 2 exs. KR 3/1998, 1 ex. PondB 4/1999, det. OB

Senegal, Gambia, Mali, Chad, Sudan, Ivory Coast, Ghana, Nigeria, Cameroon, Central African Republic, Democratic Republic of the Congo, Malawi, Zimbabwe (BISTRÖM 1988d); Guinea Bissau (NILSSON et al. 1995); Uganda, Kenya (GUIGNOT 1959b; OMER-COOPER 1959).

***Clypeodytes cibrosus* (SCHAUM, 1864)**

Zoogeographical regions: AF PL

Material examined by specialists: 3 exs. KR 3/1998, 1 ex. LC 4/1999, det. OB

Egypt, Senegal, Mali, Burkina Faso, Niger, Chad, Sudan, Ivory Coast, Nigeria, Gabon (BISTRÖM 1988d); Ethiopia (NILSSON & PERSSON 1993); Malawi, Zimbabwe (OMER-COOPER 1959).

***Clypeodytes meridionalis* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 8 exs. LC 1/1999, 17 exs. LC 2/1999, 15 exs. LC 3/1999, det. OB

Nigeria, Cameroon, Central African Republic, Democratic Republic of the Congo, Uganda, Kenya, Tanzania, Ruanda, Angola, Zambia, Malawi, Zimbabwe, Namibia, Botswana, South

Africa (BISTRÖM 1988d); Ethiopia (BISTRÖM 1988d; NILSSON & PERSSON 1993). New to the Ivory Coast.

Clypeodytes proditus GUIGNOT, 1942

Zoogeographical regions: AF

Material examined by specialists: 2 ex. KR 3/1998, det. OB

Chad, Guinea, Ivory Coast, Nigeria, Cameroon, Central African Republic, Democratic Republic of the Congo (BISTRÖM 1988d); Sudan (OMER-COOPER 1959); Malawi, Zimbabwe (OMER-COOPER 1959). Type material from Toumodi, Ivory Coast.

Hydroglyphus MOTSCHULSKY, 1853

Zoogeographical regions: AF AU OR PL; number of species: 87; latest revision: BISTRÖM (1986)

Hydroglyphus angularis (KLUG, 1834)

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. Crp 2/1999, 1 ex. KR 4/1998, det. OB

Algeria, Tunesia, Egypt, Mauritania, Senegal, Gambia, Mali, Burkina Faso, Niger, Chad, Sudan, Djibouti, Nigeria, Cameroon, Central African Republic, Uganda (BISTRÖM 1986); Morocco, Democratic Republic of the Congo (GUIGNOT 1959b); Ethiopia (BISTRÖM 1986; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

Hydroglyphus confusus (KLUG, 1834)

Zoogeographical regions: AF PL

Material examined by specialists: 4 exs. KR 4/1998, 1 ex. LC 4/1998, det. OB

Tunesia, Egypt, Mauritania, Senegal, Gambia, Mali, Burkina Faso, Niger, Chad, Sudan, Djibouti, Somalia, Guinea, Ivory Coast, Nigeria, Cameroon, Central African Republic (BISTRÖM 1986); Ethiopia (BISTRÖM 1986; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995).

Hydroglyphus dakarensis (RÉGIMBART, 1895)

Zoogeographical regions: AF

Material examined by specialists: 3 exs. Crp 2/1999, 3 exs. KR 4/1998, 1 ex. LC 4/1998, det. OB

Mauritania, Senegal, Gambia, Mali, Burkina Faso, Sudan, Guinea, Sierra Leone, Ivory Coast, Ghana, Benin, Togo, Nigeria, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Uganda, Angola, Zambia, Malawi, Zimbabwe (BISTRÖM 1986); Guinea Bissau (NILSSON et al. 1995).

Hydroglyphus flavoguttatus (RÉGIMBART, 1895)

Zoogeographical regions: AF

Material examined by specialists: 1 ex. Crp 3/1999, 1 ex. LC 1/1999, det. OB

Mauritania, Senegal, Gambia, Mali, Burkina Faso, Chad, Sudan, Guinea, Ivory Coast, Ghana, Nigeria, Cameroon, Central African Republic, Gabon, Democratic Republic of the Congo, Uganda, Kenya, Tanzania, Angola, Zambia, Malawi, Zimbabwe, Namibia, Botswana,

Mozambique, Madagascar (BISTRÖM 1986); Ethiopia (BISTRÖM 1986; NILSSON & PERSSON 1993); Guinea Bissau (BISTRÖM 1986; NILSSON et al. 1995).

***Hydroglyphus intermedius* BISTRÖM, 1986**

Zoogeographical regions: AF

Material examined by specialists: 2 exs. Crp 2/1999, det. OB

Mauritania, Senegal, Mali, Chad, Ghana, Nigeria, Cameroon, Central African Republic (BISTRÖM 1986). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Hydroglyphus speculum* (BRUNEAU DE MIRÉ & LEGROS, 1963)**

Zoogeographical regions: AF

Material examined by specialists: 5 exs. Crp 2/1999, det. OB

Chad, Sudan, Nigeria, Central African Republic, Democratic Republic of the Congo (BISTRÖM 1986); Guinea Bissau (NILSSON et al. 1995). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Leiodytes* GUIGNOT, 1936**

Zoogeographical regions: AF OR PL; number of species: 28; latest revision: BISTRÖM (1987b)

***Leiodytes demoulini* (GUIGNOT, 1955)**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 4/1998, det. OB

Sengal, Mali, Sudan, Ivory Coast, Cameroon, Central African Republic, Democratic Republic of the Congo (BISTRÖM 1987b); Guinea Bissau (NILSSON et al. 1995); Nigeria (MEDLER 1980).

***Leiodytes evanescens* (BOHEMAN, 1848)**

Zoogeographical regions: AF

Material examined by specialists: 6 exs. Crp 2/1999, 3 exs. Crp 3/1999, 3 exs. KR 3/1998, det. OB

Chad, Sudan, Liberia, Ghana, Nigeria, Cameroon, Central African Republic, Democratic Republic of the Congo, Uganda, Kenya, Tanzania, Angola, Zambia, Malawi, Zimbabwe, Namibia, Botswana, South Africa, Lesotho, Mozambique (BISTRÖM 1987b); Senegal (GUIGNOT 1961a); Mali (GUIGNOT 1943; OMER-COOPER 1959); Ethiopia (GUIGNOT 1959a; NILSSON & PERSSON 1993); Ivory Coast (BILARDO & PEDERZANI 1978; GUIGNOT 1943; OMER-COOPER 1959); Republic of the Congo (PEDERZANI & ROCCHI 1982); Swaziland (OMER-COOPER 1959).

***Leiodytes hieroglyphicus* (RÉGIMBART, 1894)**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 4/1998, 5 exs. LC 1/1999, 6 exs. LC 2/1999, det. OB

Senegal, Burkina Faso, Sudan, Ethiopia, Nigeria, Cameroon, Central African Republic, Gabon, Democratic Republic of the Congo, Uganda, Angola, Zambia, Malawi, Zimbabwe, Namibia, South Africa, Mozambique (BISTRÖM 1987b); Mali (GUIGNOT 1943); Ethiopia (GUIGNOT 1959a; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (BILARDO & PEDERZANI 1978).

***Platydytes* BISTRÖM, 1988**

Zoogeographical regions: AF; number of species: 4; latest revision: BISTRÖM (1988b)

***Platydytes coarctaticollis* (RÉGIMBART, 1894)**

Zoogeographical regions: AF

Material examined by specialists: 32 exs. LC 1/1999, 8 exs. LC 2/1999, 3 exs. LC 3/1999, det. OB

Senegal, Sudan, Ivory Coast, Ghana, Cameroon, Gabon, South Africa (BISTRÖM 1988b).

***Pseuduvarus* BISTRÖM, 1988**

Zoogeographical regions: AF OR PL; number of species: 1; latest revision: BISTRÖM (1988b)

***Pseuduvarus vitticollis* (BOHEMAN, 1848)**

Zoogeographical regions: AF OR PL

Material examined by specialists: 4 exs. Crp 3/1999, 1 ex. KR 3/1998, det. OB

Senegal, Chad, Ethiopia, Liberia, Ivory Coast, Ghana, Benin, Nigeria, Cameroon, Central African Republic, Gabon, Democratic Republic of the Congo, Republic of the Congo, Uganda, Kenya, Tanzania, Angola, Zambia, Malawi, Zimbabwe, Namibia, South Africa, Swaziland, Madagascar, Reunion (BISTRÖM 1988b); Ethiopia (BISTRÖM 1988b; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Burkina Faso, Mauritius (OMER-COOPER 1959; OMER-COOPER 1965).

***Uvarus* GUIGNOT, 1939**

Zoogeographical regions: AF AU NA NT OR; number of species: 58; latest revision: BISTRÖM (1988c)

***Uvarus angustulus* BISTRÖM, 1988**

Zoogeographical regions: AF

Material examined by specialists: 3 exs. KR 1/1999, 6 ex. KR 2/1999, 1 ex. KR 4/1999, det. OB

Senegal, Ghana, Nigeria (BISTRÖM 1988c). New to the Ivory Coast.

***Uvarus baoulicus* (GUIGNOT, 1939)**

Zoogeographical regions: AF

Material examined by specialists: 5 exs. LC 3/1999, 2 exs. LC 5/1999, det. OB

Senegal, Gambia, Chad, Sudan, Ivory Coast, Ghana, Nigeria, Cameroon, Democratic Republic of the Congo, Angola (BISTRÖM 1988c); Guinea Bissau (NILSSON et al. 1995); Gabon (BILARDO & PEDERZANI 1978); Uganda, Kenya, Malawi, South Africa (OMER-COOPER 1965). Type material from Toumodi, Ivory Coast.

***Uvarus retiarius* (GUIGNOT, 1939)**

Zoogeographical regions: AF

Material examined by specialists: 3 exs. Crp 3/1999, 2 exs. KR 3/1998, 2 exs. KR 5/1998, det. OB

Senegal, Gambia, Burkina Faso, Ivory Coast, Ghana, Nigeria (BISTRÖM 1988c); Guinea Bissau (NILSSON et al. 1995); Democratic Republic of the Congo (GUIGNOT 1959b).

***Uvarus venustulus* (GSCHWENDTNER, 1933)**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 1/1999, det. OB

Guinea, Ghana, Nigeria, Cameroon, Democratic Republic of the Congo, Tanzania (BISTRÖM 1988c); Angola (FERREIRA 1967). New to the Ivory Coast.

***Yola Gozis*, 1886**

Zoogeographical regions: AF OR PL; number of species: 43; latest revision: BISTRÖM (1983c)

***Yola cuspis* BILARDO & PEDERZANI, 1978**

Zoogeographical regions: AF

Material examined by specialists: 3 exs. Crp 3/1999, det. OB

Mauritania, Senegal, Gambia, Mali, Burkina Faso, Ivory Coast, Ghana, Benin, Nigeria, Cameroon (BISTRÖM 1983c); Niger (BISTRÖM 1987c; GUIGNOT 1943); Guinea Bissau (BISTRÖM 1983c; NILSSON et al. 1995); Liberia (BISTRÖM 1995); Gabon (BISTRÖM 1987c); Malawi (OMER-COOPER 1959).

***Yola enigmatica* OMER-COOPER, 1954**

Zoogeographical regions: AF PL

Material examined by specialists: 4 exs. Crp 3/1999, det. OB

Mauritania, Senegal, Gambia, Mali, Burkina Faso, Niger, Sudan, Ethiopia, Djibouti, Nigeria, Cameroon (BISTRÖM 1983c); Chad (BISTRÖM 1984a; BRUNEAU DE MIRÉ & LEGROS 1963); Guinea Bissau (NILSSON et al. 1995). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Yola mocquerysi* (RÉGIMBART, 1894)**

Zoogeographical regions: AF

Material examined by specialists: 4 exs. Crp 3/1999, 1ex. KR 3/1998, 1 ex. KR 4/1998, 1 ex. LC 4/1998, det. OB

Senegal, Mali, Burkina Faso, Chad, Sudan, Ivory Coast, Ghana, Benin, Nigeria, Cameroon, Democratic Republic of the Congo (BISTRÖM 1983c); Mauritania (GUIGNOT 1952a, 1955a).

***Yola nigrosignata* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 4 exs. Crp 2/1999, 2 exs. KR 4/1998, 1 ex. LC 5/1998, det. OB

Senegal, Gambia, Mali, Sudan, Ivory Coast, Ghana, Benin, Nigeria, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Uganda, Zimbabwe (BISTRÖM 1983c); Algeria (BISTRÖM 1987c); Niger (GUIGNOT 1943); Guinea Bissau (NILSSON et al. 1995).

***Yolina Guignot*, 1936**

Zoogeographical regions: AF PL; number of species: 12; latest revision: BISTRÖM (1983c)

***Yolina chopardi* (GUIGNOT, 1950)**

Zoogeographical regions: AF

Material examined by specialists: 2 exs. Crp 3/1999, 1 ex. KR 5/1998, det. OB; 1 ex. PondG 5/1998, det. AN

Niger, Sierra Leone, Ghana, Nigeria, Cameroon, Gabon (BISTRÖM 1983c); Mauritania (DEKEYSER & VILLIERS 1956; GUIGNOT 1952a); Senegal (GUIGNOT 1956b); Guinea Bissau (NILSSON et al. 1995); Guinea (GUIGNOT 1959b); Malawi, Zimbabwe (OMER-COOPER 1959). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Peschetius* GUIGNOT, 1942**

Zoogeographical regions: AF OR; number of species: 9; latest revision: BISTRÖM & NILSSON (2003)

***Peschetius parvus* OMER-COOPER, 1970**

Zoogeographical regions: AF

Material examined by specialists: 9 exs. LC 1/1999, 4 exs. LC 2/1999, 8 exs. LC 4/1999, 1 ex. LC 5/1999, 1 ex. LC-It 5/1999, det. OB

Guinea Bissau, Mali, Ivory Coast, Nigeria, Cameroon (BISTRÖM & NILSSON 2003).

***Hydrovatus* MOTSCHULSKY, 1853**

Zoogeographical regions: AF AU NA NT OR PC PL; number of species: 204; latest revision: BISTRÖM (1996a)

***Hydrovatus abraeoides* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 1/1999, det. OB

Senegal, Gambia, Ghana, Nigeria, Gabon, Democratic Republic of the Congo, Malawi, South Africa (BISTRÖM 1996a). New to the Ivory Coast.

***Hydrovatus balneator* GUIGNOT, 1954**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondA 5/1999, 1 ex. PondB 5/1999, det. OB

Senegal, Burkina Faso, Chad, Sudan, Guinea Bissau, Ghana, Nigeria (BISTRÖM 1996a); Gabon (BILARDO & PEDERZANI 1978); Ivory Coast (BISTRÖM 1996b).

***Hydrovatus brevipilis* GUIGNOT, 1942**

Zoogeographical regions: AF

Material examined by specialists: 2 exs. LC 4/1999, det. OB

Senegal, Gambia, Mali, Chad, Sudan, Guinea Bissau, Guinea, Ivory Coast, Ghana, Benin, Nigeria, Gabon, Democratic Republic of the Congo, Angola, Zimbabwe, Namibia (BISTRÖM 1996a).

***Hydrovatus facetus* GUIGNOT, 1942**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 4/1999, det. OB

Gambia, Chad, Benin, Democratic Republic of the Congo, Kenya, Zimbabwe (BISTRÖM 1996a); Botswana (BILARDO & ROCCHI 1987); Swaziland (OMER-COOPER 1958b). New to the Ivory Coast.

Hydrovatus gabonicus RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 2 exs. LC 3/1999, 1 ex. LC 4/1999, 7 exs. LC 5/1999, 1 ex. LC-It 5/1999, 2 exs. PondA 4/1999, det. OB

Senegal, Gambia, Chad, Sudan, Guinea Bissau, Benin, Nigeria, Gabon, Democratic Republic of the Congo, Ruanda (BISTRÖM 1996a). Reported as *H. macrocerus* RÉGIMBART, 1895 from Ivory Coast (BILARDO & PEDERZANI 1978, correction based on F. Pederzani, pers. comm.).

Hydrovatus insolitus GUIGNOT, 1948

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondA 4/1999, det. OB

Senegal, Gambia, Mali, Chad, Sudan, Guinea Bissau, Guinea, Ivory Coast, Benin, Nigeria, Democratic Republic of the Congo, Angola, Botswana (BISTRÖM 1996a); Gabon (BILARDO & PEDERZANI 1978); Republic of the Congo (PEDERZANI & ROCCHI 1982).

Hydrovatus oblongipennis RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondB 5/1999, det. OB

Senegal, Sudan, Ethiopia, Ghana, Nigeria, Cameroon, Central African Republic, Equatorial Guinea, Democratic Republic of the Congo, Uganda, Tanzania, Angola, Zambia, Malawi, South Africa, Mozambique (BISTRÖM 1996a); Ivory Coast (BILARDO & PEDERZANI 1978); Benin, Gabon (GUIGNOT 1959b); Republic of the Congo (PEDERZANI & ROCCHI 1982).

Hydrovatus occidentalis GUIGNOT, 1949

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 1/1999, 1 ex. LC 4/1999, det. OB

Senegal, Sudan, Guinea Bissau, Ghana, Central African Republic (BISTRÖM 1996a). New to the Ivory Coast.

Hydrovatus parallelipennis RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC-It 5/1999, 1 ex. PondA 4/1999, 3 ex. PondA 5/1999, det. OB

Sudan, Sierra Leone, Ivory Coast, Ghana, Nigeria, Central African Republic, Angola, Madagascar (BISTRÖM 1996a); Gabon (GUIGNOT 1959b); Republic of the Congo (PEDERZANI & ROCCHI 1982).

Hydrovatus parvulus RÉGIMBART, 1899

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 12/1998, 4 exs. LC 4/1999, 1 ex. PondB 4/1999, det. OB

Senegal, Gambia, Chad, Sudan, Ethiopia, Guinea, Ivory Coast, Ghana, Nigeria, Cameroon, Equatorial Guinea, Gabon, Democratic Republic of the Congo, Republic of the Congo, Tanzania, Madagascar (BISTRÖM 1996a); Kenya (ZIMMERMANN 1926); Botswana (BILARDO & ROCCHI 1987).

***Hydrovatus pictulus* SHARP, 1882**

Zoogeographical regions: AF

Material examined by specialists: 6 exs. LC 1/1999, 2 exs. PondB 4/1999, det. OB

Mali, Ghana, Central African Republic, Kenya, Tanzania, Angola, Zimbabwe, Namibia, Botswana, Swaziland, Madagascar (BISTRÖM 1996a); Sudan (GUIGNOT 1959b); Republic of the Congo (OMER-COOPER 1965); Malawi (OMER-COOPER 1958b); South Africa (OMER-COOPER 1963). New to the Ivory Coast.

***Hydrovatus pulcher* GSCHWENTNER, 1934**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondA 5/1999, 6 exs. PondB 5/1999, det. OB

Guinea, Ghana, Democratic Republic of the Congo, Republic of the Congo, Uganda, Tanzania, Angola, Zimbabwe (BISTRÖM 1996a); Ivory Coast (BILARDO & PEDERZANI 1978); Cameroon (BISTRÖM 1996b).

***Hydrovatus regimbarti* ZIMMERMANN, 1919**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. Crp 2/1999, det. OB

Senegal, Gambia, Mali, Burkina Faso, Sudan, Guinea Bissau, Guinea, Ghana, Benin, Nigeria, Cameroon, Democratic Republic of the Congo, Republic of the Congo, Tanzania, Namibia, Botswana (BISTRÖM 1996a); Ethiopia (GUIGNOT 1959b; NILSSON & PERSSON 1993); Ivory Coast (BILARDO & PEDERZANI 1978; GUIGNOT 1945); Malawi (OMER-COOPER 1963).

***Hydrovatus reticuliceps* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. Crp 2/1999, 2 exs. LC 3/1999, 5 exs. LC 5/1999, det. OB

Gambia, Chad, Sudan, Ethiopia, Guinea Bissau, Guinea, Ivory Coast, Ghana, Benin, Nigeria, Cameroon, Gabon, Democratic Republic of the Congo, Republic of the Congo, Tanzania, Angola, Malawi, Namibia (BISTRÖM 1996a); Senegal (GUIGNOT 1961a); Zambia (PEDERZANI 1988); Zimbabwe (GUIGNOT 1959b); Botswana (BILARDO & ROCCHI 1987); Mozambique (OMER-COOPER 1956).

***Hydrovatus senegalensis* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. KR 3/1999, 3 exs. LC 1/1999, 3 exs. LC 2/1999, 1 ex. LC 3/1999, 11 exs. LC 5/1999, 3 exs. PondA 4/1999, 1 ex. PondB 4/1999, det. OB

Senegal, Gambia, Chad, Sudan, Benin, Nigeria, Democratic Republic of the Congo, Tanzania, Zambia, Malawi, Zimbabwe, Botswana, Swaziland, Mozambique (BISTRÖM 1996a); Mali (GUIGNOT 1956a); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (BILARDO & PEDERZANI 1978); Kenya (BALFOUR-BROWNE 1939).

***Hydrovatus suturalis* BILARDO & PEDERZANI, 1978**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 4/1999, 1 ex. LC 5/1999, det. OB

Gambia, Chad, Sudan, Guinea Bissau, Ivory Coast, Benin, Nigeria, Democratic Republic of the Congo (BISTRÖM 1996a). Type material from Toumodi, Ivory Coast.

***Herophydrus* SHARP, 1882**

Zoogeographical regions: AF OR PL; number of species: 44; latest revision: BISTRÖM & NILSSON (2002)

***Herophydrus sudanensis* GUIGNOT, 1952**

Zoogeographical regions: AF

Material examined by specialists: 4 exs. Crp 3/1999, det. OB

Algeria, Mali, Chad, Sudan, Guinea Bissau, Guinea, Ivory Coast, Ghana, Nigeria (BISTRÖM & NILSSON 2002). For the Ivory Coast BISTRÖM & NILSSON (2002) refer to the material from Comoé NP mentioned here. The species was recorded as new to the Ivory Coast by REINTJES & PEDERZANI (2002).

***Heterhydrus* FAIRMAIRE, 1869**

Zoogeographical regions: AF PL; number of species: 5; latest revision: GUIGNOT (1959b)

***Heterhydrus senegalensis* (LAPORTE DE CASTELNAU, 1835)**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. LC 5/1999, det. OB

Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979; GUIGNOT 1959b); Nigeria (MEDLER 1980); Gabon (BILARDO & PEDERZANI 1978); Egypt, Senegal, Democratic Republic of the Congo (GUIGNOT 1959b).

***Hphydrus* ILLIGER, 1802**

Zoogeographical regions: AF AU OR PL; number of species: 133; latest revision: BISTRÖM (1982)

***Hphydrus caryerus* GUIGNOT, 1942**

Zoogeographical regions: AF

Material examined by specialists: 2 exs. Crp 2/1999, 5 exs. Crp 3/1999, 2 exs. LC 1/1999, det. OB

Senegal, Mali, Chad, Sudan, Guinea, Ghana, Benin, Nigeria, Cameroon, Central African Republic, Democratic Republic of the Congo (BISTRÖM 1982). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Hphydrus grandis* LAPORTE DE CASTELNAU, 1835**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. KR 5/1999, 1 ex. PondF 5/1999, det. OB

Egypt, Senegal, Gambia, Chad, Sudan, Ivory Coast, Benin, Nigeria, Cameroon, Gabon (BISTRÖM 1982); Mauritania (GUIGNOT 1955a; GUIGNOT 1959b); Mali (GUIGNOT 1956a; OMER-COOPER 1971); Ethiopia (BISTRÖM 1982; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Democratic Republic of the Congo (BISTRÖM 1982, 1987a).

Hyphydrus impressus KLUG, 1833

Zoogeographical regions: AF

Material examined by specialists: 1 ex. KR 3/1998, 2 exs. LC 4/1998, det. AN; 3 exs. Crp 2/1999, 2 exs. Crp 3/1999, det. OB

Senegal, Gambia, Mali, Burkina Faso, Chad, Sudan, Somalia, Ivory Coast, Ghana, Benin, Nigeria, Cameroon, Democratic Republic of the Congo, Uganda, Kenya, Tanzania, Angola, Zimbabwe, Namibia, Botswana, South Africa, Mozambique, Madagascar, Mauritius (BISTRÖM 1982); Ethiopia (BISTRÖM 1982; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Liberia (BISTRÖM 1983a); Republic of the Congo (GUIGNOT 1959b); Zambia (BISTRÖM 1987a); Malawi (BISTRÖM 1983a; OMER-COOPER 1958a); Swaziland (OMER-COOPER 1958a); Seychelles (GUIGNOT 1959b; OMER-COOPER 1958a).

Hyphydrus lasiosternus GUIGNOT, 1942

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 1/1999, 1 ex. LC 5/1999, 2 exs. PondE 4/1999, 4 exs. PondE 5/1999, det. OB

Guinea, Ivory Coast, Ghana, Republic of the Congo (BISTRÖM 1982); Central African Republic (BISTRÖM 1984b). Type material from Toumodi, Ivory Coast.

Hyphydrus maculatus BABINGTON, 1841

Zoogeographical regions: AF PL

Material examined by specialists: 3 exs. Crp 3/1999, 3 exs. LC 1/1999, 2 exs. PondA 1/1999, det. OB

Algeria, Mauritania, Cape Verde, Senegal, Gambia, Mali, Niger, Chad, Sudan, Somalia, Guinea, Sierra Leone, Ivory Coast, Benin, Nigeria, Cameroon, Central African Republic, Democratic Republic of the Congo, Kenya (BISTRÖM 1982); Ethiopia (BISTRÖM 1982; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995).

Hyphydrus parvicollis SHARP, 1882

Zoogeographical regions: AF

Material examined by specialists: 1 ex. Cal 3/2000, 1 ex. KR 4/1999, 1 ex. PondP, det. OB

Sudan, Ivory Coast, Nigeria, Gabon, Democratic Republic of the Congo, Uganda, Tanzania, Angola, Zambia, Botswana (BISTRÖM 1982); Senegal (GUIGNOT 1956b); Guinea (BISTRÖM 1984a; LEGROS 1954); Guinea Bissau (BISTRÖM 1987a; NILSSON et al. 1995); Burkina Faso (GUIGNOT 1943, 1952b); Benin, Republic of the Congo, Zimbabwe (GUIGNOT 1952b); Cameroon (BISTRÖM 1981b); Central African Republic (BISTRÖM 1984b); Ethiopia (BISTRÖM 1982; NILSSON & PERSSON 1993); Malawi (OMER-COOPER 1958a); Namibia (BISTRÖM 1987a).

Hyphydrus signatus SHARP, 1882

Zoogeographical regions: AF

Material examined by specialists: 3 exs. KR 3/1998, det. AN

Guinea, Sierra Leone, Democratic Republic of the Congo, Republic of the Congo, Uganda, Kenya, Tanzania, Ruanda, Angola, Zambia, Zimbabwe, Namibia, Botswana, South Africa, Mozambique (BISTRÖM 1982); Ethiopia (BISTRÖM 1982; NILSSON & PERSSON 1993); Cameroon (LEGROS 1949); Gabon (BILARDO & PEDERZANI 1978); Malawi (OMER-COOPER 1965); Swaziland (OMER-COOPER 1958a). New to the Ivory Coast (see also REINTJES & PEDERZANI 2002).

***Methles* SHARP, 1882**

Zoogeographical regions: AF OR PL; number of species: 7; latest revision: GUIGNOT (1959b)

***Methles cibratellus* (FAIRMAIRE, 1880)**

Zoogeographical regions: AF PL

Material examined by specialists: 1 ex. PondA 4/1999, 11 exs. PondA 5/1999, 2 exs. PondB 1/1999, 3 exs. PondB 4/1999, 3 exs. PondB 5/1999, det. FP

Algeria, Ghana (NILSSON 2001); Senegal (GUIGNOT 1956b); Gambia (LEGROS 1972); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Sudan, Democratic Republic of the Congo, Madagascar, Mauritius (GUIGNOT 1959b); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Guinea (LEGROS 1958); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979); Nigeria (MEDLER 1980; NILSSON 2001); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978).

***Derovatellus* SHARP, 1882**

Zoogeographical regions: AF NA NT OR; number of species: 38; latest revision: BISTRÖM (1979b)

***Derovatellus ater* BILARDO & PEDERZANI, 1978**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 3/1999, 6 exs. LC 5/1999, det. OB

Senegal (BISTRÖM 1981a); Ivory Coast (BILARDO & PEDERZANI 1978; BISTRÖM 1979b); Ghana, Nigeria (BISTRÖM 1979b). Type material from Toumodi, Ivory Coast.

***Derovatellus dagombae* BISTRÖM, 1979**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 3/1999, 2 exs. LC 5/1999, det. OB

Senegal (BISTRÖM 1981a); Ghana (BISTRÖM 1979b). New to the Ivory Coast.

***Laccophilus* LEACH, 1815**

Zoogeographical regions: AF AU NA NT OR PL; number of species: 254; latest revision: GUIGNOT (1959a)

***Laccophilus adspersus* BOHEMAN, 1848**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 2/1999, 1 ex. PondE 1/1999, det. FP

Ethiopia, Democratic Republic of the Congo (GUIGNOT 1959a); Nigeria (MEDLER 1980). New to the Ivory Coast.

***Laccophilus comoensis* PEDERZANI & REINTJES, 2002**

Material examined by specialists: 1 ex. Cc 2/1999 (holotype), 1 ex. KR 12/1998, 2 exs. KR 2/1999, 3 exs. PondA 1/1999 (1 ex. paratype), 1 ex. PondA 5/1999, 2 exs. PondB 1/1999 (1 ex. paratype), 2 exs. PondB 4/1999, 4 exs. PondC 12/1998 (1 ex. paratype), 2 exs. ArtA 3/1999, 1 ex. ArtA 4/1999

This species was described from the material collected in Comoé National Park (PEDERZANI & REINTJES 2002).

***Laccophilus congener* OMER-COOPER, 1957**

Zoogeographical regions: AF

Material examined by specialists: 7 exs. Crp 3/1999, 2 exs. PondA 4/1999, 1 ex. PondB 1/1999, 1 ex. PondB 4/1999, 1 ex. PondF 1/1999, 1 ex. PondL 5/1999, det. FP

Senegal, Mali, Ivory Coast, Democratic Republic of the Congo, Uganda, Zimbabwe (GUIGNOT 1959a); Guinea Bissau (NILSSON et al. 1995); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Gabon (BILARDO & PEDERZANI 1978); South Africa (NILSSON 2001).

***Laccophilus epinephes* GUIGNOT, 1955**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. LC 2/1999, 1 ex. PondA 1/1999, 1 ex. PondB 4/1999, 8 exs. PondB 5/1999, 1 ex. PondF 4/1999, 7 exs. PondF 5/1999, det. FP

Nigeria (MEDLER 1980); Democratic Republic of the Congo (NILSSON 2001). New to the Ivory Coast.

***Laccophilus evanescens* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 3 exs. Cc 1/1999, 1 ex. KR 1/1999, 1 ex. KR 4/1999, 1 ex. KR-It 1/1999, 1 ex. KR-It 2/1999, det. FP

Mauritania, Sudan, Ethiopia, Democratic Republic of the Congo (GUIGNOT 1959a); Senegal (GUIGNOT 1956a; LEGROS 1972); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (BILARDO & PEDERZANI 1978; GUIGNOT 1959a).

***Laccophilus inornatus* ZIMMERMANN, 1926**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. Cc-It 4/1999, 5 exs. KR 1/1999, 2 exs. KR-It 1/1999, 1 ex. KR-It 2/1999, 5 exs. KR-It 5/1999, det. FP

Guinea, Ivory Coast, Democratic Republic of the Congo, Tanzania (GUIGNOT 1959a); Senegal (GUIGNOT 1961a); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Nigeria (MEDLER 1980); Cameroon (BILARDO 1982); Gabon (BILARDO & PEDERZANI 1978); Malawi (NILSSON 2001).

***Laccophilus laeticulus* RÉGIMBART, 1895**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. KR 12/1998, 2 exs. KR 1/1999, 4 exs. KR-It 3/1999, det. FP

Sierra Leone, Ivory Coast, Democratic Republic of the Congo (GUIGNOT 1959a); Guinea Bissau (NILSSON et al. 1995); Mali (GUIGNOT 1943); Guinea (NILSSON 2001); Nigeria (MEDLER 1980).

***Laccophilus mediocris* GUIGNOT, 1952**

Zoogeographical regions: AF

Material examined by specialists: 1 ex. KR 4/1998, det. AN; 3 exs. Crp 2/1999, 2 exs. KR 1/1999, 1 ex. KR 2/1999, 3 ex. KR-It 3/1999, 4 exs. LC 2/1999, 1 ex. LC 4/1999, 1 ex. PondE 1/1999, det. FP

Mali, Democratic Republic of the Congo (GUIGNOT 1959a); Guinea Bissau (NILSSON et al. 1995); Guinea (LEGROS 1954; LEGROS 1958); Ivory Coast (BILARDO & PEDERZANI 1978; GUIGNOT 1959a); Nigeria (MEDLER 1980). Type material from Toumodi, Ivory Coast.

Laccophilus modestus RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 16 exs. Crp 2/1999, 8 exs. Crp 3/1999, 2 exs. Cc-lt 2/1999, 4 exs. PondB 1/1999, 1 ex. PondB 4/1999, 5 exs. KR 1/1999, 3 exs. KR 2/1999, 1 ex. KR-lt 2/1999, 1 ex. KR-lt 3/1999, 1 ex. KR-lt 4/1999, 7 exs. LC 2/1999, 9 exs. LC 3/1999, 1 ex. PondF 4/1999, 1 ex. PondL 4/1999, det. FP

Senegal (GUIGNOT 1961a; LEGROS 1972); Mali (NILSSON 2001); Ethiopia (NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Ivory Coast (FORGE 1979); Benin (GUIGNOT 1952b); Nigeria (MEDLER 1980); Gabon (BILARDO & PEDERZANI 1978; NILSSON 2001).

Laccophilus nodieri RÉGIMBART, 1895

Zoogeographical regions: AF

Material examined by specialists: 3 exs. Crp 2/1999, 6 exs. Crp 3/1999, 1 ex. KR 12/1998, 1 ex. KR 2/1999, 1 ex. LC 1/1999, 2 exs. LC 2/1999, 8 exs. LC 3/1999, 4 exs. PondH 4/1999, det. FP

Senegal, Democratic Republic of the Congo (GUIGNOT 1959a); Mali (NILSSON 2001); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Sudan (BISTRÖM 1979a); Ivory Coast (BILARDO & PEDERZANI 1978); Nigeria (MEDLER 1980).

Laccophilus pallescens RÉGIMBART, 1903

Zoogeographical regions: AF

Material examined by specialists: 11 exs. Crp 3/1999, 2 exs. KR 12/1998, 9 exs. KR 1/1999, 11 exs. KR 2/1999, 2 exs. LC 2/1999, det. FP

Mali, Benin, Democratic Republic of the Congo, Botswana, Madagascar (GUIGNOT 1959a); Burkina Faso (GUIGNOT 1943); Guinea (LEGROS 1958); Ivory Coast (BILARDO & PEDERZANI 1978; FORGE 1979; GUIGNOT 1959a); Nigeria (MEDLER 1980).

Laccophilus taeniolatus RÉGIMBART, 1889

Zoogeographical regions: AF

Material examined by specialists: 6 exs. Crp 3/1999, 1 ex. PondB 4/1999, 1 ex. ArtA 4/1999, 2 exs. ArtB 4/1999, 1 ex. PondF 4/1999, det. FP

Mauritania, Democratic Republic of the Congo (GUIGNOT 1959a); Senegal (GUIGNOT 1959a; LEGROS 1972); Mali, Burkina Faso, Niger, Ivory Coast (GUIGNOT 1943); Chad (BRUNEAU DE MIRÉ & LEGROS 1963); Ethiopia (GUIGNOT 1959a; NILSSON & PERSSON 1993); Guinea Bissau (NILSSON et al. 1995); Nigeria (MEDLER 1980).

Laccophilus vermiculosus GERSTAECKER, 1867

Zoogeographical regions: AF

Material examined by specialists: 1 ex. PondB 4/1999, 1 ex. LC 3/1999, 2 exs. LC 4/1999, det. FP

Senegal, Democratic Republic of the Congo (GUIGNOT 1959a); Guinea (LEGROS 1958); Ivory Coast (FORGE 1979); Benin (GUIGNOT 1952b); Gabon (BILARDO & PEDERZANI 1978; GUIGNOT 1959a); Kenya (NILSSON 2001).

Discussion

In this list, species only were included, if determination was checked by an acknowledged specialist. Although misidentifications never can be completely excluded, determinations provided herein have a very high credibility. Since taxonomic analysis is a long-term task, the

beetles collected in the study will be subject of taxonomic considerations for a long time to come. Therefore, it is likely that the continuous taxonomic processing of the material will yield additional results.

Although the sampling for this study was very comprehensive, some additional species most probably still occur in Comoé National Park. This assumption is based on the following considerations: (1) The vast majority of habitats sampled are located in the savannah. Extending the studies of aquatic habitats to the gallery forest and to forest islands might yield additional species. (2) This study covers only the dry season and beginning rainy season. Species may be missed, if they are not prevalent in the study area as adults within this period. (3) The sampled habitats all are within a relatively small area in the Guinea savannah close to the Comoé River. The savannah in Comoé National Park, however, continues some hundred kilometers east of the Comoé River. In the northern part, vegetation type changes to Sudan savannah. It is to be expected, that additional species adapted to drier habitats are found in the eastern and/or northern part of Comoé National Park.

Despite these restrictions, a total of 12 species in the family of Noteridae and 95 species of Dytiscidae were identified, including 30 species not yet reported from the Ivory Coast. Although the Ivory Coast has received relatively much attention by taxonomists (if compared with other African countries), a species list for the country is not available. An unpublished literature study revealed 162 species plus the new species reported here. Species lists are available only for a few West African countries and certainly are far from being complete. They rather indicate that the region needs more attention.

The most comprehensive study of Dytiscidae in West Africa was done in Guinea Bissau (NILSSON et al. 1995). Guinea Bissau comprises an area of about 35,700 km² and covers various ecological zones from coastal swamps to savannah habitats. The three years of comprehensive collection covering almost the entire country yielded 101 species of Dytiscidae.

Thus, in the small study area within Comoé National Park approximately as many species of Dytiscidae were found as in the entire diverse country of Guinea Bissau. One reason may be that the total number of specimens collected in Comoé National Park was about four times higher. Another explanation, however, is that the differing species richness is not a sampling artefact, but reflects the very high biodiversity of the Comoé National Park. High species diversity in Comoé National Park has been found in several taxa of vertebrates (FISCHER et al. 2002; RÖDEL et al. 1999; SALEWSKI & BAIERLEIN 1997) and insects (ADLBAUER 2000; FAHR 1998). In Comoé National Park several ecoregions meet. From the south to the north the Guinea savannah turns to the drier Sudan savannah. Both savannah types are transected by gallery forests along the larger rivers. These extrazonal forest vegetations can host species with a preference for more humid habitats.

This habitat diversity is reflected in the diversity of Dytiscidae and Noteridae found in the area. The list includes species with a wide distribution throughout Africa (e.g. *Hydroglyphus dakarensis*). Several species, however, have their gross distribution in the drier savannah habitats (e.g. *Eretes griseus*, *Hydroglyphus angularis*, *Hydrovatus balneator*), whereas others are usually found in the humid tropics (e.g. *Bidessus pergranulum*). The high biodiversity in Comoé National Park motivates for further efforts in research as well as in habitat conservation measures.

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Résumé

Des coléoptères aquatiques appartenant aux familles des Noteridae et Dytiscidae ont été récoltés dans la partie sud du Parc National de la Comoé (Côte d'Ivoire, Afrique de l'Ouest). Ce travail rapporte la découverte de 12 espèces de Noteridae dans quatre genres et 95 espèces de Dytiscidae dans 22 genres; 30 espèces sont nouvelles pour la Côte d'Ivoire. Une liste des espèces identifiées est présentée. La distribution générale de chaque espèce, reposant sur une analyse bibliographique approfondie, est présentée; en particulier pour l'Afrique de l'Ouest. La richesse des espèces du Parc National de la Comoé est discutée.

References

- ADLBAUER, K. 2000: Bockkäfer aus dem Comoé-Nationalpark in der Elfenbeinküste (Coleoptera: Cerambycidae). – Mitteilungen des Museums für Naturkunde Berlin, Zoologische Reihe 76: 101-112.
- BALFOUR-BROWNE, J. 1939: Coleoptera of the families Dytiscidae and Gyrinidae. Scientific results of the Cambridge expedition to the East African Lakes 1930-1. – Journal of the Linnean Society London 40: 475-485.
- BILARDO, A. 1982: Contributo alla conoscenza dei *Dytiscidae* del Cameroun (Coleoptera). – Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano 123: 441-461.
- BILARDO, A. & PEDERZANI, F. 1978: Récoltes de coléoptères aquatiques Haliplidae et Dytiscidae dans le Gabon et la Côte d'Ivoire. – Memorie della Società Entomologica Italiana 56 (1977): 93-130.
- BILARDO, A. & PEDERZANI, F. 1979: Descrizione di quattro nuove specie e di tre allotipi di Coleoptera Dytiscidae africani. – Revue Zoologique Africaine 93: 766-774.
- BILARDO, A. & ROCCHI, S. 1987: Contributo alla conoscenza degli Haliplidae e dei Dytiscidae del Botswana. – Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano 128: 85-106.
- BISTRÖM, O. 1979a: Dytiscidae collected during the researches in the White Nile (Bahr Al Jebel) by the department of Zoology, University of Khartoum, The Sudan. – Bollettino della Società Entomologica Italiana 34: 21-22.
- BISTRÖM, O. 1979b: A revision of the genus *Derovatellus* Sharp (Coleoptera, Dytiscidae) in Africa. – Acta Entomologica Fennica 35: 1-28.
- BISTRÖM, O. 1981a: *Derovatellus hancocki* sp. n. (Coleoptera, Dytiscidae) with notes on the genus in Africa. – Annales Entomologici Fennici 47: 69-72.
- BISTRÖM, O. 1981b: *Hyphydrus* species (Coleoptera, Dytiscidae) collected in Cameroon, with the description of *Hyphydrus brancuccii* n. sp. – Entomologica Basiliensis 6: 183-186.
- BISTRÖM, O. 1982: A revision of the genus *Hyphydrus* Illiger (Coleoptera, Dytiscidae). – Acta Zoologica Fennica 165: 1-121.

- BISTRÖM, O. 1983a: New records of *Hyphydrus* and *Derovatellus*, with descriptions of two new *Hyphydrus* species (Coleoptera, Dytiscidae). – Annales Entomologici Fennici 49: 117-121.
- BISTRÖM, O. 1983b: New records of three *Cybister* species from southern Africa (Coleoptera, Dytiscidae). – Annales Entomologici Fennici 49: 63.
- BISTRÖM, O. 1983c: Revision of the genera *Yola* Des Gozis and *Yolina* Guignot (Coleoptera, Dytiscidae). – Acta Zoologica Fennica 176: 1-67.
- BISTRÖM, O. 1984a: Description of *Hyphydrus holomelas* sp. n. and *H. gibbosus* sp. n., with new records of *Derovatellus*, *Hyphydrus*, *Yola* and *Yolina* (Coleoptera, Dytiscidae). – Annales Entomologici Fennici 50: 89-92.
- BISTRÖM, O. 1984b: Notes on the genus *Hyphydrus*, with description of *H. imitator* sp. n. (Coleoptera, Dytiscidae). – Annales Entomologici Fennici 50: 51-54.
- BISTRÖM, O. 1985: A revision of the species group *B. sharpi* in the genus *Bidessus* (Coleoptera, Dytiscidae). – Acta Zoologica Fennica 178: 1-40.
- BISTRÖM, O. 1986: Review of the genus *Hydroglyphus* Motschulsky (= *Guignotus* Houlbert) in Africa (Coleoptera, Dytiscidae). – Acta Zoologica Fennica 182: 1-56.
- BISTRÖM, O. 1987a: New records of *Hyphydrus*, with the description of two new species from Africa (Coleoptera, Dytiscidae). – Annales Entomologici Fennici 53: 87-90.
- BISTRÖM, O. 1987b: Review of the genus *Leiodytes* in Africa (Coleoptera, Dytiscidae). – Annales Entomologici Fennici 53: 91-101.
- BISTRÖM, O. 1987c: *Yola deviata* sp. n. and *Y. ferruginea* sp. n. and new taxonomic and faunistic records of the genus (Coleoptera, Dytiscidae). – Revue Française d'Entomologie 9: 95-99.
- BISTRÖM, O. 1988a: *Bidessus bertrandi* sp. n., and faunistic notes on the genus from Africa (Coleoptera, Dytiscidae). – Annales Entomologici Fennici 54: 29-31.
- BISTRÖM, O. 1988b: Generic review of the Bidessini (Coleoptera Dytiscidae). – Acta Zoologica Fennica 184: 1-41.
- BISTRÖM, O. 1988c: Review of the Genus *Uvarus* Guignot in Africa (Coleoptera, Dytiscidae). – Acta Entomologica Fennica 51: 1-38.
- BISTRÖM, O. 1988d: Revision of the genus *Clypeodytes* Régimbart in Africa (Coleoptera: Dytiscidae). – Entomologica Scandinavica 19: 199-238.
- BISTRÖM, O. 1995: *Uvarus laurentius* sp. n. and *Africodytes maximus* sp. n. and new faunistic records of other Bidessini (Coleoptera, Dytiscidae) from the Ethiopian region. – Entomologica Fennica 6: 43-46.
- BISTRÖM, O. 1996a: Taxonomic revision of the genus *Hydrovatus* Motschulsky (Coleoptera, Dytiscidae). – Entomologica Basiliensis 19: 57-584.
- BISTRÖM, O. 1996b: Two new *Hydrovatus* species described from Kenya and Indonesia (Coleoptera, Dytiscidae). – Entomologica Basiliensis 19: 51-55.
- BISTRÖM, O. & NILSSON, A.N. 2002: *Herophydrus* Sharp: cladistic analysis, taxonomic revision of the African species, and world check list. – Koleopterologische Rundschau 72: 15-111.
- BISTRÖM, O. & NILSSON, A.N. 2003: Taxonomic revision and cladistic analysis of the genus *Peschetius* Guignot (Coleoptera: Dytiscidae). – Aquatic Insects 25: 125-155.
- BISTRÖM, O. & SANFILIPPO, N. 1986: *Bidessus apicidens* sp. n. and faunistic notes on the genus from Africa (Coleoptera, Dytiscidae). – Annales Entomologici Fennici 52: 46-47.
- BRUNEAU DE MIRÉ, P. & LEGROS, C. 1963: Les coléoptères Hydrocanthares du Tibesti. – Bulletin de l'Institut Français d'Afrique Noire 25: 838-894.

- DEKEYSER, P.L. & VILLIERS, A. 1956: Contribution à l'étude du peuplement de la Mauritanie. Notations écologiques et biogéographiques sur la faune de l'Adrar. – Mémoires de l'Institut Français d'Afrique Noire 44: 222.
- FAHR, J. 1998: Die Sandlaufkäfer (Coleoptera: Cicindelidae) des Comoé-Nationalparks, Elfenbeinküste: Faunistik, Zoogeographie und Ökologie. – Bonner Zoologische Beiträge 47: 321-343.
- FERREIRA, M.C. 1967: Catalogo dos coleopteros de Angola. – Revista de Entomologia de Mocambique 8: 1154-1317.
- FISCHER, F., GROSS, M. & LINSENMAIR, K.E. 2002: Updated list of the larger mammals of the Comoé National Park, Ivory Coast. – Mammalia 66: 83-92.
- FORGE, P. 1979: Données sur les peuplements d'Hydrocanthares des mares temporaires des savanes de Lamto (Côte d'Ivoire). – Annales de l'Université d'Abidjan 12: 93-113.
- FRANCISCOLO, M.E. & SANFILIPPO, N. 1986: Gyrinidae and Dytiscidae collected in Sierra Leone (1982, 1983, 1984) by Dr. W. Rossi (Col. Hydradephaga). – Problemi Attuali di Scienza e di Cultura 260: 11-36.
- FRANCISCOLO, M.E. & SANFILIPPO, N. 1990: Four new species and new records of Hydradephaga from Sierra Leone (Coleoptera: Haliplidae, Gyrinidae, Dytiscidae). – Accademia Nazionale dei Lincei 265: 133-153.
- GUIGNOT, F. 1943: Dytiscidae et Gyrinidae de la Côte d'Ivoire et du Soudan Français. – Revue Française d'Entomologie 9: 81-103.
- GUIGNOT, F. 1945: Coleoptera Dytiscidae. 2. Mission scientifique de l'Omo. – Mémoires du Muséum National d'histoire Naturelle 19: 215-322.
- GUIGNOT, F. 1950: Contribution à l'étude de l'Air. Coléoptères Dytiscidae et Gyrinidae. – Mémoires de l'Institut Français d'Afrique Noire 10: 260-263.
- GUIGNOT, F. 1952a: Contribution à l'étude du peuplement de la Mauretanie. Dytiscides et Gyrinides. – Bulletin de l'Institut Français d'Afrique Noire 14: 529-536.
- GUIGNOT, F. 1952b: Mission A. Villiers au Togo et au Dahomey (1950). XV. Coléoptères Hydrocanthares. – Bulletin de l'Institut Français d'Afrique Noire 14: 518-528.
- GUIGNOT, F. 1955a: Contribution à l'étude du peuplement de la Mauretanie. Dytiscides (2^e note). – Bulletin de l'Institut Français d'Afrique Noire 17: 859-866.
- GUIGNOT, F. 1955b: Dytiscides et Gyrinides capturés dans des grottes de Guinée. – Bulletin de l'Institut Français d'Afrique Noire 17: 856-858.
- GUIGNOT, F. 1955c: Dytiscides et Gyrinides de la Guinée française récoltés par M. A. Villiers. – Bulletin de l'Institut Français d'Afrique Noire 17: 1095-1101.
- GUIGNOT, F. 1956a: Coléoptères Dytiscidae et Gyrinidae du Soudan français. – Bulletin de l'Institut Français d'Afrique Noire 18: 83-92.
- GUIGNOT, F. 1956b: Le Parc National du Niokolo-Koba. XIII. Coleoptères Hydrocanthares. – Mémoires de l'Institut Français d'Afrique Noire 48: 211-223.
- GUIGNOT, F. 1959a: Revision des Hydrocanthares d'Afrique (Coleoptera Dytiscoidea). Deuxième partie. – Annales du Musée royal du Congo belge Sér. 8 (Sci. Zool.) 78: 323-648.
- GUIGNOT, F. 1959b: Revision des Hydrocanthares d'Afrique (Coleoptera Dytiscoidea). Première partie. – Annales du Musée royal du Congo belge Sér. 8 (Sci. Zool.) 70: 1-313.
- GUIGNOT, F. 1961a: Le Parc National du Niokolo-Koba. XXIV. Coleoptera Dytiscoidea et Gyrinoidea (Supplément). – Mémoires de l'Institut Français d'Afrique Noire 62: 231-239.
- GUIGNOT, F. 1961b: Revision des Hydrocanthares d'Afrique (Coleoptera Dytiscoidea). Troisième partie. – Annales du Musée royal du Congo belge Sér. 8 (Sci. Zool.) 90: 659-995.

- LEGROS, C. 1949: Coléoptères Hydrocanthares. Récoltes de J. Carayon au Cameroun. – Bulletin de la Société Entomologique de France 54: 53-57.
- LEGROS, C. 1954: La réserve naturelle intégrale du Mont Nimba. XXI. Coléoptères Hydrocanthares (Mission M. Lamotte, 1942). – Mémoires de l'Institut Français d'Afrique Noire 40: 265-280.
- LEGROS, C. 1958: La réserve naturelle intégrale du Mont Nimba. IX. Coléoptères Hydrocanthares (Mission M. Lamotte et Roy, juillet-décembre 1951). – Mémoires de l'Institut Français d'Afrique Noire 53: 209-218.
- LEGROS, C. 1972: Contribution à l'étude biologique du Sénégal septentrional. XXI. Coléoptères Hydrocanthares. – Bulletin de l'Institut Français d'Afrique Noire 34: 457-471.
- LINSENMAIR, K.E. 1998: Risk-spreading and risk-reducing tactics of West African anurans in an unpredictably changing and stressful environment. – In Newbery, D.M., Prins, H.H.T. & Brown, N.D. (eds.): Dynamics of tropical communities. – Oxford: Blackwell Science, pp. 221-242.
- MEDLER, J.T. 1980: Insects of Nigeria - Check list and bibliography. – Memoirs of the American Entomological Institute 30: 1-919.
- MILLER, K.B. 2002: Revision of the genus *Eretes* Laporte, 1833 (Coleoptera: Dytiscidae). – Aquatic Insects 24: 247-272.
- MOUCHAMPS, R. 1957: Remarques concernant quelques Dytiscidae africains intéressants (8e note). – Revue de Zoologie et Botanique Africaines 55: 141-150.
- NILSSON, A.N. 2001: Dytiscidae (Coleoptera). – Stenstrup: Apollo Books, 1-395 pp.
- NILSSON A.N., BILARDO, A. & ROCCHI, S. 1996: A check list of *Copelatus* Erichson 1832 species (Coleoptera Dytiscidae) from Afrotropical and Madagascan regions with a review of published penis drawings. – Tropical Zoology 9: 11-48.
- NILSSON, A.N. & PERSSON, S. 1993: Taxonomy, distribution and habitats of the Dytiscidae (Coleoptera) of Ethiopia. – Entomologica Fennica 4: 57-94.
- NILSSON, A.N., PERSSON, S. & CUPPEN, J.G.M. 1995: The diving beetles (Coleoptera, Dytiscidae) of Guinea Bissau in West Africa. – Journal of African Zoology 109: 489-514.
- OMER-COOPER, J. 1956: Some records of Dytiscidae (Col.) from Mozambique. – Sociedade de Estudos de Mocambique 101: 19-32.
- OMER-COOPER, J. 1958a: Dytiscidae from Nyasaland and Southern Rhodesia. IV. Vatellinae, Methlinae and Hydroporinae, Hyphydrini. – Journal of the Entomological Society of South Africa 21: 249-260.
- OMER-COOPER, J. 1958b: Some Dytiscidae (Col.) from Swaziland, Southern Africa, with the description of a new species. – Entomologist's Monthly Magazine 94: 57-60.
- OMER-COOPER, J. 1959: Dytiscidae from Nyasaland and Southern Rhodesia. V. Hydroporinae, Bidessini. – Journal of the Entomological Society of South Africa 22: 108-137.
- OMER-COOPER, J. 1963: Dytiscidae from Nyasaland and Southern Rhodesia. VI. Hydroporinae, Hydrovatini. – Journal of the Entomological Society of South Africa 26: 159-186.
- OMER-COOPER, J. 1965: Coleoptera Dytiscidae. – In Hanström, B., Brinck, P. & Rudebeck, G. (eds.): South African animal life. – Stockholm: Swedish Natural Science Council, pp. 59-214.
- OMER-COOPER, J. 1967: Cybisterini and addenda. Dytiscidae (Coleoptera) of Nyasaland and Southern Rhodesia. – Journal of the Entomological Society of Southern Africa 29: 48-63.
- OMER-COOPER, J. 1971: Taxonomic studies on some African *Hyphydrus* (Coleoptera: Dytiscidae). – Journal of the Entomological Society of Southern Africa 34: 277-288.
- OMER-COOPER, J. 1979: The species of *Bidessus* Sharp (Coleoptera: Dytiscidae) of Africa south of the Sahara including Madagascar - 2. – Journal of the Entomological Society of Southern Africa 42: 197-216.

- PEDERZANI, F. 1988: Dytiscidae collected in Zambia and description of *Hyphydrus fluviatilis* n.sp. and *Hyphydrus zambiensis* n.sp. (Coleoptera Dytiscidae). – Atti dell'Accademia Roveretana degli Agiati 236: 26B (1986): 103-118.
- PEDERZANI, F. & REINTJES, N. 2002: *Laccophilus comoensis* n.sp. from Ivory Coast (Insecta, Coleoptera, Dytiscidae). – Quaderno di Studi e Notizie di Storia Naturale della Romagna 16, suppl.: 35-41.
- PEDERZANI, F. & ROCCHI, S. 1982: Dytiscidae (Coleoptera) collected in the People's Republic of Congo by Mr. Giovanni Onore in the years 1977-1980. – Redia 65: 65-88.
- POILECOT, P. 1991: Un écosystème de Savanne Soudanienne: Le Parc National de la Comoé (Côte d'Ivoire). – Paris: Unesco, 346 pp.
- POREMBSKI, S. 1991: Beiträge zur Pflanzenwelt des Comoé-Nationalparks (Elfenbeinküste). – Natur und Museum 121: 61-83.
- REINTJES, N. & PEDERZANI, F. 2002: Seventeen records of Noteridae and Dytiscidae new to the Ivory Coast, West Africa (Coleoptera: Noteridae, Dytiscidae). – Koleopterologische Rundschau 72: 113-122.
- ROCCHI, S. 2000: Contributo alla conoscenza dei ditiscidi di Guinea con descrizione di due nuove specie. – Fragmenta Entomologica (Roma) 32: 11-33.
- RÖDEL, M.-O. 2000: Herpetofauna of West Africa. Vol. I. Amphibians of the West African Savannah. – Frankfurt am Main: Edition Chimaira, 332 pp.
- RÖDEL, M.-O., KOUADIO, K. & MAHSBERG, D. 1999: Die Schlangenfauna des Comoé-Nationalparks, Elfenbeinküste: Ergänzungen und Ausblick. – Salamandra 35: 165-180.
- SALEWSKI, V. & BAIERLEIN, F. 1997: Comoé-Nationalpark, Elfenbeinküste: Forschung und Vogelbeobachtung im größten Schutzgebiet Westafrikas. – Der Falke 44: 356-363.
- ZIMMERMANN, A. 1926: Schwimmkäfer-Material aus Deutsch-Ost-Afrika, gesammelt von Geh. Regierungsrat Methner in den Jahren 1902-1916. – Entomologische Blätter 22: 18-31.

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