

Catalog of the Scorpions of the World (1758-1998) by V. Fet, W. D. Sissom, G. Lowe, & M. Braunwalder (New York Entomological Society, 2000: 690 pp.)
Discussion and supplement for 1999 and part of 2000.

František Kovářík
P.O.Box 27, CZ-145 01 Praha 45, Czech Republic

Introduction

Since the discussion below concerns primarily matters in which my opinion differs from that held by the authors, the reader may get the impression that I am being highly critical of the catalog. Therefore, I would like to emphasize that I consider it a very professionally done significant contribution which fills a basic gap in this branch of arachnology. All the authors are internationally recognized experts and I concur with their handling of the subject matter and their conclusions in a great majority of instances. I also realize that my own list of scorpions with synonymies and distributions (Kovářík, 1998) contains more errors and inaccuracies than this catalog, which has been my primary reason for comparing the two in detail and trying to come up with addenda and corrigenda.

Discussion of some data given in the catalog

Adherence to the International Code of Zoological Nomenclature assures procedural uniformity and unequivocality, i.e. stability in taxonomy. However, I do not see any reason to erect substitute names for invalid names in instances which concern old synonyms exceedingly unlikely to be revived, or for valid species whose names are identical with names today regarded as synonyms of species belonging to other families just because a long time ago these species happened to be placed in the same, often collective genus (e. g. *Scorpio* or *Buthus*), since quite certainly this will not happen again. As an example can serve re-naming *Scorpio maurus tunetanus* Birula, 1910 to *Scorpio maurus punicus* Fet, 2000: 479 (family Scorpionidae) because *Buthus occitanus tunetanus* (Herbst, 1800) (family Buthidae) was originally described in the genus *Scorpio*. I realize the re-naming is in accord with the Code, but fail to comprehend the meaning of this exercise.

Following are several examples of matters in which the data found in the catalog cannot be called erroneous but other points of view are nevertheless possible. However, some of them are minor inaccuracies whose impact is likely to be at worst minimal (no work of this nature and scope can possibly be perfect).

- 1) Differences of opinion on the year of publication if it can no longer influence synonymy.
- 2) Parentheses are incorrectly applied in some instances. For example, *Centruroides chiapanensis tapachulaensis* (Hoffmann, 1932) (see p. 102) was originally described in the genus *Centruroides* as *C. margaritatus tapachulaensis* Hoffmann, 1932 and the author thus should not be in parentheses. The same is true of *Tityus pictus microdon* (Pocock, 1893), new combination (see p. 256), which was described as *Tityus smithi microdon* Pocock, 1893, of *Vachoniochactas lasallei* González-Sponga, 1978, and of some subspecies of the genus *Euscorpius* where parentheses were used in assigning them to different species. Also some endings are incorrect, for instance *Hottentotta conspersus* should be *Hottentotta conspersa* (this error occurs also in my list, Kovařík, 1998: 110).
- 3) A taxon whose type locality is not precisely known, types are lost, and other specimens have not been found although the presumed area of occurrence has been reasonably well collected, is hardly worth upholding as valid. It ought to be either declared a nomen dubium or placed with a question mark in synonymy of a species to which it most likely belongs. As an example can serve *Buthus europaeus tridentatus* P. Franganillo, 1918 from Spain which does not have a precise type locality, no type has been designated, and the entire description consists of less than five lines without any differentiating characters. Vachon (1949) regarded all European populations of *Buthus occitanus* (Amoreux, 1789) as the nominotypical subspecies *B. o. occitanus* (Amoreux, 1789), yet the catalog introduces a new combination *Buthus occitanus tridentatus* (Franganillo, 1918) (see p. 97) without revising the group or mentioning any specimens of this taxon. In light of persisting taxonomic problems with other subspecies of *Buthus occitanus*, I feel the new combination is not warranted and will only complicate future studies of this complex.
- 4) Since the Catalog does not include citations referring to occurrences in individual countries, I refrain from commenting on differences based on my records. They are not frequent and in most instances inconsequential anyway. I would not dare to leave out some of the distributional data the catalog does, e. g. those given by Mello-Leitão, but on the other hand some other deletions were probably appropriate because they concern dubious records often stemming from repeated copying of old and most likely erroneous data.

A special case is the distribution of *Compsobuthus acutecarinatus* (Simon, 1882) that the catalog gives only as Yemen and Oman (p. 125), whereas I have specimens from nearly the entire Arabian peninsula and eastward to Pakistan, which in my opinion belong to this species. However, a truly unequivocal determination will require a revision of the entire genus *Compsobuthus*.

- 5) Valuable is the attempt to resolve problems around a book published by Farzanpay in the Persian language, in which he described the new genera *Olivierus* Farzanpay, 1987, *Raziamus* Farzanpay, 1987, *Sassanidothus* Farzanpay, 1987, and the new genus and species *Simonoides farzanpayi* Vachon & Farzanpay, 1987. Publication of new taxa in that language creates a worrisome precedent because of difficulties encountered in translation and the resulting uncertainties in identification of the taxa.
- 6) It is a pity the authors have not used the four-letter system of institutional abbreviations proposed in the work of ARNETT H. R. Jr., SAMUELSON G. A. & NISHIDA G. M. 1993: *The insect and spider collections of the world. Flora & Fauna Handbook No. 11, Second edition*. Gainesville: Sandhill Crane Press, 308 pp. It is a unifying system that makes the work of museum curators and revising authors easier, and it has advantages in computer application.

In the catalog the abbreviations instead vary from two to five letters and are sometimes confusing. For instance, ZMH means the Zoologisches Institut und Zoologisches Museum, Universität Hamburg, Germany, although in other works this abbreviation is used for the Zoological Museum in Helsinki, Finland. Arnett et al. disposed of this inconsistency by using ZMUH for the Zoologisches Institut und Zoologisches Museum, Universität Hamburg and MZHF for the Zoological Museum in Helsinki.

The remarks below concern taxa that present problems or on which I hold a different opinion, but currently available data do not permit to decide which opinion is correct.

Androctonus amoreuxi finitimus (Pocock, 1897) is deemed valid species by Fet & Lowe (2000: 73) without explanation.

The status of *Buthacus leptochelys* (Ehrenberg, 1829), *Buthacus tadmorensis* (Simon, 1892), and *Buthacus yotvatensis* Levy, Amitai & Shulov, 1973 cannot be resolved as the catalog attempts, without the study of types. Based on examination of a relatively large number of specimens, I believe *Buthacus yotvatensis* Levy, Amitai & Shulov, 1973 to be a synonym of *Buthacus tadmorensis* (Simon, 1892).

Centruroides nitidus taino Armas & Marcano Fonseur, 1987 (p. 116) is really best regarded as a subspecies. Santiago-Blay (1993: 6) considers *Centruroides taino* to be a full species (followed by Kovařík, 1998: 108) but does not give supporting reasons.

Some authors regard *Compsobuthus abyssinicus* (Birula, 1903) as a subspecies of *Compsobuthus acutecarinatus* (Birula, 1903). This discrepancy can be resolved only by a revision of the entire genus which is riddled with equivocally defined species-group taxa, among them *Compsobuthus acutecarinatus arabicus* Levy, Amitai & Shulov, 1973, *Compsobuthus acutecarinatus jordanensis* Levy, Amitai & Shulov, 1973, *Compsobuthus werneri carmelitis* Levy, Amitai & Shulov, 1973, *Compsobuthus werneri klaptocki* (Birula, 1909), and *Compsobuthus werneri longipalpis* Levy, Amitai & Shulov, 1973.

The catalog gives *Plesiobuthus paradoxus* Pocock, 1900 as valid, although other authors consider it a synonym of *Liobuthus kessleri* Birula, 1898 (see pp. 157, 213), primarily because the type has been lost. As long as the type is not found or lectotype designated, it is more appropriate in my opinion to regard *Plesiobuthus paradoxus* Pocock, 1900 as a synonym or nomen dubium.

Considering all the problems encountered with subspecies of *Mesobuthus eupeus* (C. L. Koch, 1839) and the extraordinary variability of this species, I do not think *Mesobuthus eupeus macmahoni* (Pocock, 1900) should be elevated to the species status unless it is supported by a revision.

Hadogenes tityrus (Simon, 1888)

= *Hadogenes bifossulatus* Roewer, 1943: 232 (syn. by Newlands, 1980: 72; Kovařík, 1998: 133)

Hadogenes bifossulatus: Fet, 2000: 387

Newlands' (1980) work is an unpublished thesis, however I have seen the holotype of *Hadogenes bifossulatus* Roewer, 1943 deposited at SMFD (a juvenile only about 15 mm long) and agree with his opinion.

One more comment on the genus *Hadogenes*: the catalog (p. 390) gives all seven subspecies of *Hadogenes trichiurus* (Gervais, 1843) as valid with a note that "Kovařík (1998: 133) listed all described subspecies in synonymy to the nominotypic form, without a justification". The subspecies were synonymized by Newlands (1980: 88 – except the overlooked *Hadogenes trichiurus paucidens* Werner, 1939: 362 = *Hadogenes trichiurus wernerii* Fet, 1997, nom. nov.) in an unpublished work (Revision of the scorpion genus Hadogenes. Thesis, Scient. Fac. Science, Potchefstroom, Univ. C. H. E., Transvaal, 188 pp.), and in accordance with nomenclatural rules the validation of his act is provided in my book (Kovařík, 1998: 133). It is the same with subspecies of *Hadogenes troglodytes* (Peters, 1862).

Somewhat inconsistent approach to treating information is evidenced by a synonymy on p. 389, where *Ischnurus hahnii* Peters, 1862 is newly synonymized with *Hadogenes taeniurus* (Thorell, 1876) because „syntypes were recently analyzed by L. Prendini and identified as *H. taeniurus*“, which means the act is based merely on an unpublished communication of unspecified nature.

A list of species and genera described in 1999 and 2000, including two species described in 1998 but not found in the catalog:

Bothriuridae Simon, 1880

Brachistosternus (Ministernus) simoneae Lourenço, 2000: 94

TL: Brésil, Etat de Goiás, Serranópolis; MZSP.

Brazilobothriurus Lourenço & Monod, 2000: 146

Brazilobothriurus pantanalensis Lourenço & Monod, 2000: 146

TL: Brazil, Matto Grosso do Sul, Corumbá, south of Fazenda Salina; MHNG.

Urophonius transandinus Acosta, 1998: 158

TL: Chile, Valparaíso, 33°03'S 71°38'W; ZMUH.

Buthidae C. L. Koch, 1837

Ananteris guyanensis Lourenço & Monod, 1999: 301

TL: French Guyana, Saint Eugéne; MHNG.

Ananteris leilae Lourenço, 1999: 94

TL: Colombia, Departamento Chocó, Riosucio-La Gira (20m); ICNC.

Ananteris mariaelegans Lourenço, 1999: 97

TL: Ecuador, Manabi Province, 75-80 km NE of Chone, 90 km W of Santo Domingo; ZMUH.

Babycurus exquisitus Lowe, 2000: 185

TL: Oman, Jabal Shams, Jabal Akhdar, Al Hajar Al Gharbi, 23°14.29'N 57°11.62'E, 1855 m; NHMB.

Cicileus cloudsleythompsoni Lourenço, 1999: 33

TL: Niger, Dao Timni, 260 km N of Bilma; ZMUH.

Compsobuthus simoni Lourenço, 1999: 91

TL: Niger, Birni Nkonni; ZMUH.

Compsobuthus williamsi Lourenço, 1999: 87

TL: Morocco, between Erfoud and Ouarzazate (30° 42' N - 5° 48' W); ZMUH.

Congobuthus Lourenço, 1999: 188

Congobuthus fagei Lourenço, 1999: 188

TL: Congo, Londina-Niadi; MNHN.

Egyptobuthus Lourenço, 1999: 591

Egyptobuthus vaissadei Lourenço, 1999: 595

TL Egypte, région nord du Sinai, proche des côtes de la Mer Rouge; MHNG.

Grosphus intertidalis Lourenço, 1999: 135

TL: Madagascar, Province of Toliara, 3.5 km north of Tulear; ZMUH

Lychas ceylonensis Lourenço & Huber, 1999: 23

TL: Sri Lanka, Girital, near to a freshwater lake; ZMUH.

Microtityus starri Lourenço & Huber, 1999

TL: Trinidad and Tobago, Little Tobago, south west part; MHNG.

Paraorthochirus kaspareki Lourenço & Huber, 2000: 141

TL: Oman, Muscat Area, Ras Al Hamra; MNHN.

Paraorthochirus kinzelbachi Lourenço & Huber, 2000: 139

TL: Oman, Wadi Tayin, North of Ibra; MNHN.

Tityobuthus ivohibe Lourenço & Goodman, 1999: 476

TL: Madagascar, Province de Fianarantsoa, exterior northern limit of Réserve Spéciale d'Ivohibe, along Hefitany river, 7,5 km ENE Ivohibe, 22° 28,2'S – 46° 57,6'E (900 m); FMNH.

Tityopsis aliciae Armas & Frías, 1998: 46

TL: Tehuantepec, Oaxaca, Mexico; CNAC.

Tityus florezi Lourenço, 2000: 454

TL: Colombia, Dept Tolima, Mariquita, Bremen (300 m); ICNC.

Tityus gaffini Lourenço, 2000: 449

TL: Colombia, Dept Vichada, Cro. Gaviotas (180 m); ICNC.

Tityus erikae Lourenço, 1999: 1

TL: Colombia, Dept. Cesar, Chimichagua; ICNC.

Tityus prancei Lourenço, 2000: 452

TL: Colombia, Dept Cesar, La Jagua de Ibirico (9°35'5"N - 73°9'45"W), Quebrada el Indio (520 m); ICNC.

Chaerilidae Pocock, 1893*Chaerilus petrzelkai* Kovařík, 2000: 48

TL: Vietnam, 80 km NNE Saigon, prov Dong Nai, valley Ma Da, Tri An dam; FKCP.

Chaerilus tichyi Kovařík, 2000: 60

TL: Malaysia, Pahang, Tioman Island, Kampong Gentling; FKCP.

Chaerilus tryznai Kovařík, 2000: 65

TL: China (Tibet), Bomi env. 29°52' N, 95°45'E, mixed forest; FKCP.

Chactidae Pocock, 1893*Chactas ozendai* Lourenço, 1999: 127

TL: Colombia, Department of Antioquia, Angelopolis, 1860 m; ZMUH.

Scorpiopidae Kraepelin, 1905*Scorpiops braunwalderi* Kovařík, 2000: 170

TL: India, Chakrata; FKCP.

Scorpiops dastychi Kovařík, 2000: 170

TL: India, Himalaya, Molta; ZMUH.

Scorpiops feti Kovařík, 2000: 174

TL: India, Sikkim; ZMUH.

Scorpiops marginsonae Kovařík, 2000: 189

TL: China (Tibet); FKCP.

Scorpiops problematicus Kovařík, 2000: 194

TL: Thailand, prov. Chiang Mai, Doi Pui mt., 18°49'N–98°54'E; FKCP.

Scorpiops sejnai Kovařík, 2000: 195

TL: Vietnam, Bach-ma Nat. Park, 1200 m, 16°10' N–107°54' E; FKCP.

Hadogenidae Lourenço, 1999*Hadogenes angolensis* Lourenço, 1999: 932

TL: Angola, Région de l'Huila, «Fazenda Bumbo» près de Capangombe (15°10'S - 13°09'E); MHNG.

Scorpionidae Latreille, 1802*Pandinus (Pandinops) pococki* Kovařík, 2000: 3

TL: Somalia, Geriban env., 09°20'N 48°09'E; FKCP.

Abbreviations:

TL = Type locality and depository

CNAC = Instituto de Biología, Universidad Nacional Autónoma de México, Mexico

FKCP = František Kovařík Collection, Praha, Czech Republic

FMNH = Field Museum of Natural History, Chicago, Illinois, USA

ICNC = Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogota, Colombia

MHNG = Museum d'Histoire naturelle, Geneve, Geneva, Switzerland

MNHN = Muséum National d'Histoire Naturelle, Paris, France

MZSP = Museu de Zoologia da Universidade de São Paulo, Brazil

NHMB = Naturhistorisches Museum, Basel, Switzerland

ZMUH = Zoologisches Institut und Zoologisches Museum, Universität Hamburg, Germany

Changes published in 1999 and 2000:

For easy orientation, the names given in the catalog are in boldface.

Buthidae C. L. Koch, 1837*Caribetityus* Lourenço, 1999: 136*Caribetityus elii* (Armas & Marcano Fondeur, 1992)*Tityus elii* Armas & Marcano Fondeur, 1992: 22; Fet & Lowe, 2000: 243*Caribetityus elii*: Lourenço, 1999: 136*Caribetityus quisqueyanus* (Armas, 1982)*Tityus quisqueyanus* Armas, 1982: 13; Fet & Lowe, 2000: 258*Caribetityus quisqueyanus*: Lourenço, 1999: 138***Centruroides baergi*** Hoffmann, 1932*Centruroides nigrovariatus baergi* Hoffmann, 1932: 354; Fet & Lowe, 2000: 115*Centruroides baergi*: Armas & Martín-Friás, 1999: 31***Centruroides meisei*** Hoffmann, 1939*Centruroides elegans meisei*: Fet & Lowe, 2000: 103*Centruroides meisei*: Armas & Martín-Friás, 1999: 33***Hottentotta hendersoni*** (Pocock, 1900)*Mesobuthus hendersoni*: Fet & Lowe, 2000: 177*Hottentotta hendersoni*: Kovařík, 1999: 292***Hottentotta pachyura*** (Pocock, 1897)*Mesobuthus pachyurus*: Fet & Lowe, 2000: 178*Hottentotta pachyurus*: Kovařík, 1999: 292***Hottentotta rugiscutis*** (Pocock, 1897)

= *Hemibuthus kraepelini* Roewer, 1943: 213 (syn. by Kovařík, 1999: 291)

Mesobuthus rugiscutis: Fet & Lowe, 2000: 178

Hottentotta (?) kraepelini: Fet & Lowe, 2000: 141

Hottentotta rugiscutis: Kovařík, 1999: 291

Hottentotta tamula (Fabricius, 1798)

Mesobuthus tamulus: Fet & Lowe, 2000: 179

Hottentotta tamulus: Kovařík, 1999: 292

Hottentotta trilineata (Peters, 1862)

Hottentotta trilineatus: Fet & Lowe, 2000: 144

= *Buthus eminii* Pocock, 1890: 98 **Syn. n.**

Hottentotta eminii: Fet & Lowe, 2000: 137

Remark: I am currently studying the genus *Hottentotta* and preparing a key to all the species. So far, I have published a key to Indian species (Kovařík, 1999: 291-293) and list those which belong in *Hottentotta*, whereas in the catalog they are placed in *Mesobuthus*. *Hemibuthus kraepelini* Roewer, 1943, which based on examination of the type I synonymized with *Hottentotta rugiscutis* (Pocock, 1897), appears in the catalog as *Hottentotta (?) kraepelini* (Roewer, 1943). I also examined the type of *Hottentotta eminii* (Pocock, 1890) and *Hottentotta polysticta* (Pocock, 1896). Whereas *Hottentotta polysticta* is definitely valid and very different from *Hottentotta trilineata* (Peters, 1862), *Hottentotta eminii* is a synonym of *Hottentotta trilineata* (Peters, 1862).

Tityus stigmurus (Thorell, 1876)

Tityus stigmurus: Fet & Lowe, 2000: 262; Lourenço & Cloudsley-Thompson, 1999: 154

= *Tityus serrulatus* Lutz & Mello, 1922; Fet & Lowe, 2000: 260 (syn. by Lourenço & Cloudsley-Thompson, 1999: 154)

= *Tityus lamottei* Lourenço, 1981; Fet & Lowe, 2000: 248 (syn. by Lourenço & Cloudsley-Thompson, 1999: 154)

Tityus paraensis Kraepelin, 1896

Tityus paraensis: Fet & Lowe, 2000: 253

= *Tityus piceus* Caporiacco, 1947: 20; Fet & Lowe, 2000: 255 (syn. by Kovařík, 2000: 463 under *Tityus cambridgei*)

Chaerilidae Pocock, 1893

Chaerilus pictus (Pocock, 1890)

Chaerilus pictus: Fet, 2000: 327; Kovařík, 2000: 53

= *Chaerilus gemmifer* Pocock, 1894: 81; Fet, 2000: 326 (syn. by Kovařík, 2000: 53)

Chaerilus rectimanus Pocock, 1899

Chaerilus rectimanus Pocock, 1899: 418; Kovařík, 2000: 54.

Chaerilus celebensis: Fet, 2000: 325

Chaerilus truncatus Karsch, 1879

Chaerilus truncatus Karsch, 1879: 108; Fet, 2000: 327; Kovařík, 2000: 62

= *Chaerilus granosus* Pocock, 1900: 56; Fet, 2000: 326 (syn. by Kovařík, 2000: 63)

= *Chaerilus anthracinus* Pocock, 1900: 57; Fet, 2000: 324 (syn. by Kovařík, 2000: 63)

= *Chaerilus anthracinus rufescens* Pocock, 1900: 57; Fet, 2000: 324 (syn. by Kovařík, 2000: 63)

? = *Chaerilus granifrons* Kraepelin, 1913: 147; Fet, 2000: 326 (syn. by Kovařík, 2000: 63)

= *Chaerilus hirsti* Kraepelin, 1913: 150; Fet, 2000: 326 (syn. by Kovařík, 2000: 63)

Chaerilus variegatus Simon, 1877

Chaerilus variegatus Simon, 1877: 239; Fet, 2000: 328; Kovařík, 2000: 66.

= ? *Chaerilus borneensis* Simon, 1880: 379; Fet, 2000: 325 (syn. by Kovařík, 2000: 67)
 = *Chelomachus birmanicus* Thorell, 1889: 584; Kovařík, 2000: 67.
Chaerilus birmanicus: Fet, 2000: 324
 = *Chaerilus variegatus nigricolor* Pocock, 1899: 419; Fet, 2000: 328 (syn. by Kovařík, 2000: 67)

Chactidae Pocock, 1893

Brotheas granimanus Pocock, 1898

Brotheas granimanus: Sissom, 2000: 298; Kovařík, 1999: 464

= *Broteochactas magnus* Caporiacco, 1947: 20 (this name does not appear in the catalog)
 (syn. by Kovařík, 1999: 464)

Chactas major Kraepelin, 1912;

Chactas lepturus major Kraepelin, 1912: 67; Kraepelin, 1914: 25 (redescription)

Chactas lepturus: Sissom, 2000: 303

Chactas major: Lourenço, 1999: 127

Scorpiopidae Kraepelin, 1905

Scorpiops Peters, 1862: 510

= *Scorpiops (Euscorpiops)* Vachon, 1980 (syn. by Kovařík, 2000: 164)

Euscorpiops: Fet, 2000: 488

Scorpiops: Kovařík, 2000: 163

Scorpiops hardwickii (Gervais, 1843)

Scorpiops hardwickii: Fet, 2000: 492; Kovařík, 2000: 175

= *Scorpiops affinis* Kraepelin, 1898: 44; Fet, 2000: 491 (syn. by Kovařík, 2000: 175)

= *Scorpiops crassimamus* Pocock, 1899: 267; Fet, 2000: 491 (syn. by Kovařík, 2000: 175)

= *Scorpiops insculptus* Pocock, 1900: 68; Fet, 2000: 492 (syn. by Kovařík, 2000: 175)

Scorpiops jendekei Kovařík, 1994

Scorpiops (Scorpiops) hardwickei jendekei Kovařík, 1994: 62.

Scorpiops hardwickii jendekei: Fet, 2000: 492

Scorpiops jendekei: Kovařík, 2000: 180

Scorpiops lindbergi Vachon, 1980

Scorpiops (Euscorpiops) lindbergi Vachon, 1980: 155

Euscorpiops lindbergi: Fet, 2000: 489

Scorpiops lindbergi: Kovařík, 2000: 186

= *Scorpiops kraepelini* Lourenço, 1998: 246; Fet, 2000: 493 (syn. by Kovařík, 2000: 186)

Scorpiops petersii Pocock, 1893

Scorpiops petersii Pocock, 1893: 323; Fet, 2000: 494; Kovařík, 2000: 192

= ? *Scorpiops petersi von-wicki* Birula, 1913: 417 (syn. by Kovařík, 2000: 192)

Scorpiops petersii vonwicki: Fet, 2000: 494

Scorpionidae Latreille, 1802

Pandinus (Pandinops) bellicosus (L. Koch, 1875)

Pandinus (Pandinurus) bellicosus: Fet, 2000: 470

Pandinus (Pandinops) bellicosus: Kovařík, 2000: 4

= *Pandinus pugillator* Pocock, 1900: 52 (syn. by Kovařík, 2000: 3)

Pandinus (Pandinops) pugilator Fet, 2000: 469

Ischnuridae Simon, 1879

Hormiops Fage, 1933

Hormiops Fage, 1933: 30; Lourenço & Monod, 1999: 338; Kovařík, 2000: 57

Liocheles: Fet, 2000: 395

Hormiops davidovi Fage, 1933

Hormiops davidovi Fage, 1933: 32; Lourenço & Monod, 1999: 343; Kovařík, 2000: 57

? *Liocheles australasiae*: Fet, 2000: 396

Iomachus politus Pocock, 1896

Iomachus politus Pocock, 1896: 317; Fet, 2000: 394

= *Jomachus borana* Caporiacco, 1939: 307 (syn. by Kovařík, 2000: 464)

Iomachus borana: Fet, 2000: 393

Urodacidae Pocock, 1893

Urodacinae: Fet, 2000: 480

Urodacidae: Lourenço, 2000: 25

Le Xuan Hue, Pham Quynh Mai, Pham Dinh Sac & Ngo Thi Cat (1998: 7) list *Isometrus basilicus* from Vietnam. I believe it in reality is *Isometrus (Reddyanus) vittatus* Pocock, 1900, which was found in Vietnam already by Fage (1933: 28) and three specimens of which are in my own collection (Vietnam, prov. Dong Nai, 80 km NNE Saigon, valley Ma Da, Tri An dam, 1FA, 27.IV.1996, 1ME1MA, III.1998, leg. K. Petrželka, FKCP).

Literature not cited in the catalog:

Similarly to Braunwalder, I try to select works relating to taxonomy and/or faunistics.

ACOSTA L. E. 1985: Redescripción de *Urophonius achalensis* Abalos y Hominal, 1974 (Scorpiones, Bothriuridae). *Physis, secc. C* 43(104): 5-12.

ACOSTA L. E. 1995: The scorpions of the Argentinian western Chaco. II. Community survey in the Llanos district. *Biogeographica* 71(4): 187-196.

ACOSTA L. E. 1998: *Urophonius transandinus* sp. nov. (Bothriuridae), a scorpion from central Chile. *Stud. Neotrop. Fauna & Environm* 33: 157-164.

ACOSTA L. E. & MAURY E. A. 1990: Estridulación en *Timogenes elegans* (Mello-Leitao) (Scorpiones, Bothriuridae). [Stridulation in *Timogenes elegans* (Mello-Leitao) (Scorpiones, Bothriuridae)]. *Bol. Soc. Biol. Concepción* 61: 29-37.

AGASSIZ L. 1846: *Nomenclator zoologicus continens nomina systematica generum arachnidarum tam viventium quam fossilium*. Soloduri, 1842-1846: 1-14.

ALEXANDER A. J. 1957: The courtship and mating of the scorpion, *Opistophthalmus latimanus*. *Proc. Zool. Soc. London* 128(4): 529-544.

ALEXANDER A. J. 1959: Courtship and mating in the buthid scorpions. *Proc. Zool. Soc. London* 133: 145-169.

ALEXANDER A. J. 1959: A survey of the biology of scorpions of South Africa. *African Wild Life* 13: 99-106.

ALEXANDER A. J. 1960: A note of the evolution of stridulation within the family Scorpionidae. *Proc. Zool. Soc. London* 133: 391-399.

ANGERMANN H. 1957: Über Verhalten, Spermatophorenbildung und Sinnesphysiologie von *Euscorpius italicus* Hbst. und verwandten Arten (Scorpiones, Chactidae). *Zeits. F. Tierpsych.* 14: 276-302.

- ARMAS L. F. DE** 1984: Introduccion a los escorpiones (Arachnida: Scorpiones) de Puerto Rico. *Carib. J. Sci.* **20**(1-2): 1-7.
- ARMAS L. F. DE** 1986: Biología y morfometría de *Rhopalurus garridoi* Armas (Scorpionida: Buthidae). *Poeyana* **333**: 1-27.
- ARMAS L. F. DE, MARTIN-FRIAS E.** 1998: Presencia del genero *Tityopsis* en Mexico y descripción de una especie nueva (Scorpiones Buthidae). *An. Esc. Nac. Cien. Biol.*, **43**: 45-49.
- BAERG W. J.** 1954: Regarding the biology of the common Jamaican scorpion. *Ann. Ent. Soc. America* **47**(2): 272-276.
- BASTAWADE D. B.** 1992: Morphological study of spermatophore of a common Indian scorpion *Mesobuthus tamulus tamulus* (Fabr.). *Rec. Zool. Surv. India* **91**(2): 221-225.
- BASTAWADE D. B.** 1994: A study of hemispermatophores in Indian scorpions of the families Chaerilidae, Vaejovidae and Ischnuridae. *Rec. Zool. Surv. India* **94**(2-4): 435-437.
- BASTAWADE D. B.** 1997: Distribution of *Neoscorpiops* scorpions in the western ghats of Maharashtra and Gujarat and possible trichobothridial variations among isolated populations. *J. Bombay Nat. Hist. Soc.* **94**: 104-114.
- BENTON T. G.** 1990: Reproduction and parental care in the scorpion, *Euscorpius flavicaudis*. *Behaviour* **117**(1-2): 20-28.
- BENTON T. G.** 1992: The ecology of the scorpion *Euscorpius flavicaudis* in England. *J. Zool. Lond.* **226**: 351-368.
- BERGMAN N. & FITZPATRICK M. J.** 1996: Observations on newborn *Parabuthus transvaalicus* Purcell (Scorpiones: Buthidae). *Afr. Entomol.* **4**(1): 99-100.
- BROWN CH. A.** 1996: Interpopulation and intersexual variation in pectine tooth counts in *Centruroides vittatus* (Scorpionida, Buthidae). *J. Arachnol.* **24**: 262-264.
- BROWN CH. A.** 1997: Growth rates in the scorpion *Pseudouroctonus reddelli* (Scorpionida, Vaejovidae). *J. Arachnol.* **25**: 288-294.
- BÜCHERL W.** 1953: Escorpiões e escorpionismo no Brasil. I. Manutenção dos escorpiões em viveiros e extração do veneno. *Mem. Inst. Butantan* **25**: 53-82.
- BÜCHERL W.** 1953: Escorpiões e escorpionismo no Brasil. II. Atividade das peconhas de *Tityus serrulatus* e *T. bahiensis* sobre camundongos. *Mem. Inst. Butantan* **25**: 83-108.
- BÜCHERL W.** 1955: Studien über einige brasilianische Skorpione und ihre Trockengifte. *Arzneim.* **5**: 68-72.
- BÜCHERL W.** 1955/56: Escorpiões e escorpionismo no Brasil. IV. Considerações em torno de substâncias escorpionicidas e outras medidas de combate aos escorpiões. *Mem. Inst. Butantan* **27**: 107-120.
- BÜCHERL W.** 1955/56: Escorpiões e escorpionismo no Brasil. V. Observações sobre o aparelho reprodutor masculino e o acasalamento de *Tityus trivittatus* e *Tityus bahiensis*. *Mem. Inst. Butantan* **27**: 121-155.
- BÜCHERL W.** 1959: Escorpiões e escorpionismo no Brasil. IX. Combate ao escorpião, *Tityus serrulatus* (Buthidae, Tityinae), nos terrenos da General Motors do Brazil, em São José dos Campos, Estado de São Paulo. *Mem. Inst. Butantan* **29**: 243-253.
- BÜCHERL W.** 1969: Escorpionismo no Brasil. *Mem. Inst. Butantan* **34**: 9-24.
- BÜCHERL W. & PUCCA N.** 1955/56: Escorpiões e escorpionismo no Brasil III. Titulação, por meio de camundongos, das peconhas de *Tityus costatus* (Karsch), *Tityus trivittatus* Kraepelin, 1898 e *Bothriurus bonariensis* (Koch), 1842. *Mem. Inst. Butantan* **27**: 41-50.
- CARL J.** 1923: Un nouvel habitat du Scorpion en Suisse. *Soc. Phys. Hist. Nat. Geneve* **40**(3): 114-115.
- CEKALOVIC T. K.** 1969: Presencia de *Centromachetes pococki* (Scorpionida) en el contenido gástrico de colaptes pitius Molina, 1782 (Aves-Picidae). *Bol. Soc. Biol. Concepcion* **41**: 209-210.

- CORRONCA J. A. & PERALTA M. A. 1991: Lista de tipos y material de escorpiones (Arachnida: Scorpionida), de la colección de la fundación miguel lillo (Tucumán, Argentina). *Mem. Fund. M. Lillo* 1991: 1-8.
- COSTA F. G. & PÉREZ-MILES F. 1994: Ecología de los escorpiones Bothriuridae de Sierra de las Animas, Maldonado, Uruguay. *Aracnologia* 21: 1-5.
- DANIN A. 1994: Association of *Salsola inermis* and scorpion burrows in leached soils in the Judean desert, Israel. *Israel J. Plant Sci.* 42: 37-40.
- DELACOUR J. & DUPRE G. 1992: Presence de *Microbuthus fagei* Vachon 1949 au Maroc (Scorpionida, Buthidae). *Arachnides* 15: 23-24.
- DONOSO B. R. 1948: Primeros casos de escorpionismo por *Brachistosternus ehrenbergi* (Gervais), 1841. *Rev. Méd. Chile* 76(5): 279-281.
- EL-HENNAWY H. K. 1990: Key to scorpion families (Arachnida: Scorpionida). *Serket* 2(1): 14-19.
- FAGE L. 1929: Origine probable et différenciation de la faune des scorpions de Madagascar. *C. R. Soc. Biog. Paris* 49: 72-76.
- FRANCKE O. F. 1984: The life history of *Diplocentrus bigbendensis* Stahnke (Scorpiones, Diplocentridae). *Southwest. Natur.* 29(4): 387-393.
- GILTAY M. L. 1935: Liste des arachnides d'extreme-orient et des îles orientales recueillis, en 1932, par S. A. R. le prince Léopold de Belgique. *Bull. Mus. Royal. Hist. Nat. Belg.* 11(20): 1-3.
- GOYFFON M. & VACHON M. 1979: Arachnids of Saudi Arabia. Note on Poisoning Accidents through Scorpions in Saudi Arabia. *Fauna Saudi Arabia* 1: 67-68.
- HARINGTON A. 1978: Burrowing biology of the scorpion *Chelocotomus jonesii* Pocock (Arachnida: Scorpionida: Scorpionidae). *J. Arachnol.* 5: 243-249.
- HOFMAN C. 1967: Bau und funktion der Trichobothrien von *Euscorpius carpathicus* L. *Zeit. Vergl. physiol.* 54: 290-352.
- KEEGAN H. L. 1980: *Scorpions of Medical Importance*. Univ. Press Mississippi, Jackson 140 pp.
- KOCH L. E. 1978: A comparative study of the structure, function and adaptation to different habitats of burrows in the scorpion genus *Urodacus* (Scorpionida, Scorpionidae). *Rec. West. Austr. Mus.* 6(2): 119-146.
- KOCH L. E. 1980: The primary types of Arachnida, Chilopoda, Diplopoda, Insecta, Onychophora and Pycnogonida in the western Australia Museum. *Rec. West. Austr. Mus.* 8: 295-326.
- KOPSTEIN F. 1927: De Javaansche reuzenschorpioen. *Der Zool. Reis Tropen* 1927: 102-108.
- KRAEPELIN K. 1898: Über die Linné'schen Arten der Gattung *Scorpio*. *Zool Anz., sep.* 564-565: 438-447.
- LANKESTER E. R. 1883: Notes on some habits of the scorpions *Androctonus funestus* Ehr., and *Euscorpius italicus* Roes. *J. Linn. Soc. Zool.* 16: 455-462.
- LAWRENCE R. F. 1972: Collecting scorpions in South West Africa. *News Bull. Zool. Soc. Southern Africa* 10(2), 1969: 8-9.
- LE XUAN HUE, PHAM QUYNH MAI, PHAM DINH SAC & NGO THI CAT 1998: Scorpions (Scorpionoides) in Vietnam (en vietnamien). *Tap Chi Sinh Hoc* 20(1): 7-9.
- LOCKET N. A. 1986: Albinism and eye structure in an Australian scorpion, *Urodacus yaschenkoi* (Scorpiones; Scorpionidae). *J. Arachnol.* 14: 101-115.
- LOURENÇO W. R. 1976: Comportamento alimentar em escorpiões do cerrado do Distrito Federal. *Cienc. Cult.* 28(7): 901.
- LOURENÇO W. R. 1978: Etude sur les scorpions appartenant au "complexe" *Tityus trivittatus* Kraepelin, 1898 et, en particulier de la sous-espèce *Tityus trivittatus fasciolatus*, Pessoa 1935 (Buthidae). *Thèse de Docteur, Paris*.

- LOURENÇO W. R. 1979: La biologie sexuelle et le développement postembryonnaire du scorpion Buthidae: *Tityus trivittatus fasciolatus* Pessoa, 1935. *Rev. Nordest. Biol.* 2(1-2): 49-96.
- LOURENÇO W. R. 1980: A propósito da escorpiofauna nos parques nacionais. *Brasil Florestal* 10(44): 25-29.
- LOURENÇO W. R. 1982: Presença do escorpião *Isometrus maculatus* (DeGeer, 1778) na Reserva Biológica de Atol das Rocas. *Brasil Florestal* 12(52): 61-62.
- LOURENÇO W. R. 1984: Alguns casos de teratologia observados em escorpíos do gênero *Tityus* (Scorpiones, Buthidae). *Rev. Brasil. Biol.* 44(1): 9-13.
- LOURENÇO W. R. 1985: Essai d'interpretation de la distribution du genre *Opisthacanthus* (Arachnida: Scorpiones: Ischnuridae) dans les régions néotropicale et afrotropicale. *These Doctorat, Paris VI*: 287 pp.
- LOURENÇO W. R. 1985: Systematics and biogeography of some neotropical scorpions. *Am. Arach.* 32: 10.
- LOURENÇO W. R. 1988: Le développement postembryonnaire de *Centruroides pococki* Sissom & Francke, 1893 (Buthidae) et de *Didymocentrus lesueuri* (Gervais, 1844) (Diplocentridae) (Arachnida, Scorpiones). *Revue Arachnol.* 7(5): 213-222.
- LOURENÇO W. R. 1989: The "Campos" of Amazonia, present endemic centres of a typical savanna-scorpionfauna. *Mém. Soc. Biogéogr.* 3: 74-83.
- LOURENÇO W. R. 1991: Parthenogenesis in the scorpion *Tityus columbianus* (Thorell) (Scorpiones: Buthidae). *Bull. British Arachnol. Soc.* 8(9): 274-276.
- LOURENÇO W. R. 1995: Scorpions, scorpionism, life history strategies and parthenogenesis. *J. Venom. Anim. Tox.* 1(2): 51-62.
- LOURENÇO W. R. 1996: The biogeography of scorpions. *Rev. Suisse Zool.* 1996: 437-448.
- LOURENÇO W. R. & BASTOS E. K. 1979: Sur la prédation spécifique du Scorpion *Bothriurus araguaya* par la Chouette *Speotyto cunicularia grallaria*. *L'Oiseau R.F.O.* 49(3): 231-233.
- LOURENÇO W. R. & CLOUDSLEY-THOMPSON J. L. 1995: Stridulatory apparatus and the evolutionary significance of sound production in *Rhopalurus* species (Scorpiones: Buthidae). *J. Arid Environ.* 31: 423-429.
- LOURENÇO W. R., CUELLAR O. & MENDEZ DE LA CRUZ F. R. 1996: Variation of reproductive effort between parthenogenetic and sexual populations of the scorpion *Tityus columbianus*. *J. Biogeogr.* 23(5): 681-686.
- LOURENÇO W. R. & DEKEYSER P. L. 1976: Deux oiseaux prédateurs de scorpions. *L'ois. Rev. Franc. Ornith.* 46(2): 167-172.
- LOURENÇO W. R. & EICKSTEDT V. R. D. 1988: Notes sur le développement postembryonnaire de *Tityus strandi* (Scorpiones, Buthidae). *J. Arachnol.* 16: 392-393.
- LOURENÇO W. R. & SASTRE C. 1988: Les savanes néotropicales: Essai de définition, caractéristiques écologiques et biogéographiques. Exemples de modalités de peuplements chez les Scorpions et chez quelques Phanérogames (Ochnacées). *C. R. Soc. Biogéogr.* 64(2): 43-77.
- MARCUZZI G. 1956: Fauna delle Dolomiti. *Mem. Inst. Ven. Sci. Lett. Arti* 31: 94-95.
- MAURY E. A. 1969: Observaciones sobre el ciclo reproductivo de *Urophonius brachycentrus* (Thorell, 1877) (Scorpiones, Bothriuridae). *Physis Sec. C.* 78: 131-139.
- MAURY E. A. 1983: Singular anomalia sexual en un ejemplar de *Brachistosternus pentheri* Mello-Leitao 1931 (Scorpiones, Bothriuridae). *Rev. Soc. Ent. Argentina* 42(1-4): 155-156.
- MAURY E. A. 1997: *Tityus trivittatus* en la Argentina nuevos datos sobre distribución, partenogenesis, sinantropía y peligrosidad (Scorpiones, Buthidae). *Publ. Mus. Argentino Cien. Nat. „Bernardino Rivadavia“* 24: 1-24.
- MCDANIEL M. 1968: Notes on the biology of California scorpions. *Entomol. News* 79(10): 278-284.

- MELLO-LEITAO C.** 1936: La Distribution des Arachnides et son Importance pour la Zoogéographie Sud-Américaine. *C. R. XII. Congr. Int. Zool.* 2: 1209-1216.
- NEWLANDS G.** 1971: Scorpion Research at the Transvaal Museum. *Bull. Transv. Mus.* 10: 6-7
- NEWLANDS G.** 1980: Revision of the scorpion genus *Hadogenes*. *Thesis, Scient. Fac. Science, Potchefstroom Univ. C. H. E, Transvaal*, 188 pp.
- PERETTI A. V.** 1991: Comportamiento de Apareamiento de *Zabius fuscus* (Thorell) (Buthidae, Scorpiones). *Bol. Soc. Biol. Concepción Chile* 62: 123-146.
- PERETTI A. V.** 1992: El espermatoforo de *Bothriurus bonariensis* (C. L. Koch) (Scorpiones, Bothriuridae): Morfología y funcionamiento. *Bol. Soc. Biol. Concepción Chile* 63: 157-167.
- PERETTI A. V.** 1994: Comportamiento de Relacion Madre-crio de *Tityus trivittatus* Kraepelin (Scorpiones, Buthidae). *Bol. Soc. Biol. Concepción Chile* 65: 9-21.
- PERETTI A. V.** 1995: Structure and function of the hemispermatophore and spermatophore of *Bothriurus flavidus* Kraepelin, 1910 (Scorpiones, Bothriuridae). *Iheringia, sér. Zool.* 78: 29-37
- PERETTI A. V.** 1996: Una probable estrategia para inseminar mas hembras en machos de *Bothriurus bonariensis* (Scorpiones, Bothriuridae). *J. Arachnol.* 24: 167-169.
- PETRUNKEVITCH A.** 1916: The shape of the sternum in scorpions is a systematic and a phylogenetic character. *Amer. Natur.* 50(598): 600-608.
- PILLET J. M.** 1994: Les Scorpions de Suisse. *Protection Nature* 6: 28-29.
- POCOCK R. I.** 1893: Notes on the habits of some living scorpions. *J. Bombay Nat. Hist. Soc.* 8(1): 287-294.
- POCOCK R. I.** 1894: Scorpions and their geographical distribution. *Nat. Sci.* 4(27): 353-364.
- POCOCK R. I.** 1898: List of the Arachnida and "Myriopoda" obtained in Funafuti by Prof. W. J. Sollas and Mr. Stanley Gardiner, and in Rotuma by Mr. Stanley Gardiner. *Ann. Mag. Nat. Hist.* 7(1): 321-327.
- POCOCK R. I.** 1904: On a new stridulating organ in scorpions discovered by W. J. Burchell in Brazil in 1828. *Ann. Mag. Nat. Hist.* 7(13): 56-62.
- POLIS G. A.** 1990: Imhibition of precipitated fog by Namib Desert scorpions. *J. Arachnol.* 18: 362-363.
- PROBST P.** 1967: Der Geburtsvorgang beim Skorpion *Isometrus maculatus* De Geer (Buthidae). *Rev. Suisse Zool.* 74(3): 616-619.
- PROBST P.** 1967: Mehrmalige Trächtigkeit und Dauer der Tragzeit beim Skorpion *Isometrus maculatus* De Geer (Fam. Buthidae). *Rev. Suisse Zool.* 75(4): 1066-1070.
- PROBST P.** 1972: Zur Fortpflanzungsbiologie und zur Entwicklung der Giltdrusen beim Skorpion *Isometrus maculatus* (De Geer, 1778) (Scorpiones: Buthidae). *Acta Tropica* 29: 1-87
- QUINLAN, G. T. SMITH & CALVER M. C.** 1995: Relationship between morphology and feeding behaviour in the syntopic scorpions *Urodacus armatus* Pocock and *Urodacus novaehollandiae* Peters (Scorpiones: Scorpionidae). *J. Aust. Ent. Soc.* 34: 277-279.
- RIVELLINI G.** 1986: Revisione della sistematica di *Euscorpius flavicaudis* (De geer) (Scorpionida, Chactidae), in Italia. *Tesi laurea Sci. Nat., Univ. Degli Studi Milano Fac. Sci.*, 130 pp.
- SANTIAGO-BLAY J. A.** 1993: The scorpions of Puerto Rico and Hispaniola. *American Arachnol.* 47: 6-7.
- SANTIAGO-BLAY J. A. & FRANCKE O. F.** 1984: Redescription of *Tityus crassimanus* and its junior synonym *Tityus antillanus*. *J. Arachnol.* 12: 283-290.
- SIMON M. E.** 1872: Etudes sur les Scorpions. *Rev. Mag. Zool. Extrait*: 1-13.
- SIMON M. E.** 1885: Matériaux pour Servir à la faune des Arachnides du Sénégal. *Ann. Soc. Ent. France* 6(5): 386.
- SIMON M. E.** 1887: Arachnides receueillis à obock en 1886 par M. Le Dr. L. Faurot. *Bull. Soc. Zool. France (Extrait)* 17: 1-4.

- SIMON M. E.** 1889: Etudes arachnologiques XXXIV. Étude sur les Arachnides de l'Yemen. *Études Arachnol.* 22: 122(46).
- SIMON M. E.** 1899: Liste des Arachnides en Algérie par M. P. Lesne et description d'une espèce nouvelle. *Bull. Mus. Hist. Nat. Paris* 1899: 82-85.
- SIMON M. E.** 1904: Arachnides reccucillis par M. A. Pavie en Indo-Chine. *Mission Pavie en Indo-Chine III* 1904: 270-295.
- SMITH G.T.** 1966: Observations on the life history of the scorpion *Urodacus abruptus* Pocock (Scorpionidae), and an analysis of its home sites. *J. Aust. Zool.* 14: 383-398.
- STAHNKE H. L.** 1970: Scorpion nomenclature and mensuration. *Entomol. News* 81(12): 297-316.
- STEWIEN KLAUS E. & DELGADO A.** 1968: Estudios sobre las trichobothria en escorpiones sudamericanos - I. Verificación de la constancia del carácter tricobotrial en la ontogenesis de *Tityus serrulatus* Lutz e Mello, 1922 y de *Tityus bahiensis* (Perty) 1834. *Rev. Per. Ent.* 11(1): 80-84.
- STOCKWELL S. A.** 1989: Revision of the phylogeny and higher classification of scorpions (Chelicerata). *Ph. D. Thesis, Univ. Berkeley, Berkeley* 319pp.
- TIKADER B. K.** 1987: The Scorpions. pp. 20-38 in: *Handbook of Indian Spiders*. (Edited by the Director). Calcutta: Zool. Survey of India, 251 pp.
- VACHON M.** 1951: Sur quelques Scorpions "Halophiles" (*Microbuthus fagei*, *Mesobuthus confucius* et *Euscorpius flavicaudis*). *Bull. Mus. Natl. Hist. Nat. Paris* 23(3): 256-260.
- VACHON M.** 1951: Biogeographie des scorpions du nord de l'Afrique. *C. R. Som. Séanc. Soc. Biogeogr.* 241: 61-65.
- VACHON M.** 1962: Quelques remarques sur *Aristobuthus pterygocercus* Finnegan, scorpion (Buthidae) habitant L'Arabie. *Arch. Inst. Pasteur Algérie* 38: 399-405.
- VACHON M. & MILLOT M. J.** 1972: Sur l'établissement d'une nomenclature trichobothriale uniforme convenant à l'ensemble des Scorpions (Arachnides) et l'existence de trois types distincts de trichobothriotaxie. *C. R. Acad. Sc. Paris, sér. D* 275: 2001-2004.
- WHITTICK R. J.** 1971: Scorpions from Palestine, Syria, Iraq and Iran. *Field Research Projects* 1971: 1-4.

Literature postdating the catalog:

- ARMAS L. F. DE & MARTIN-FRÍAS E.** 1999: Complementos a la taxonomía de *Centruroides nigrovariatus* y *C. elegans* (Scorpiones: Buthidae) de México. *An. Esc. Nac. Cien. Biol.*, 44(1-4): 27-35.
- CRUCITTI P.** 1999: Scorpion species diversity in southwestern peloponnese, Greece (Scorpiones). *Contrib. Zoogeogr. Ecol. Eastern Medit. Reg.* 1: 251-256.
- HOMMEL D., HULIN A. & LOURENÇO W. R.** 2000: Accident scorpionique létal par *Tityus cambridgei* Pocock. À propos d'un cas en Guyane française. *Conc. Médic.* 122-07: 481-484.
- KABAKIBI M. M., KHALIL N. & AMR Z.** 1999: Scorpions of southern Syria. *Zool. Middle East* 17: 79-89.
- KOMPOSCH C. & SCHERABON B.** 1999: Rote Liste der Skorpione Kärntens (Arachnida: Scorpiones). *Natur. Kärnten* 15: 619-624.
- KOVAŘÍK F.** 1999: Review of European scorpions, with a key to species. *Serket* 6(2): 38-44.
- KOVAŘÍK F.** 1999: *Hemibuthus kraepelini*, a junior synonym of *Hottentotta rugiscutis* (Scorpiones: Buthidae). *Acta Soc. Zool. Bohem.* 63: 291-293.
- KOVAŘÍK F.** 1999: New synonymies in the scorpion families Buthidae, Chactidae, and Ischnuridae. *Acta Soc. Zool. Bohem.* 63: 463-466.

- KOVARÍK F. 2000: *Pandinus (Pandinops) pococki* sp. n. from Somalia, and *Pandinus pugilator*, a junior synonym of *Pandinus (Pandinops) bellicosus* comb. n. (Scorpiones, Scorpionidae). *Serket* 7(1): 1-7.
- KOVARÍK F. 2000: First reports of *Liocheles nigripes* from Indonesia and Malaysia and *Hormiops davidovi* from Malaysia (Scorpiones: Ischnuridae). *Acta Soc. Zool. Bohem.* 64: 57-64.
- KOVARÍK F. 2000: Revision of family Scopiopidae (Scorpiones), with descriptions of six new species. *Acta Soc. Zool. Bohem.* 64: 153-201.
- KOVARÍK F. 2000: Revision of family Chaerilidae (Scorpiones), with descriptions of three new species. *Serket* 7(2): 38-77.
- LOURENÇO W. R. 1999: A new species of *Cicileus* Vachon, 1948 (Chelicerata, Scorpiones, Buthidae) from Niger. *Entomol. Mitt. Zool. Mus. Hamburg* 13(159): 29-36.
- LOURENÇO W. R. 1999: Two new species of *Compsobuthus* Vachon, 1948 (Scorpiones, Buthidae) from Africa. *Entomol. Mitt. Zool. Mus. Hamburg* 13(160): 85-94.
- LOURENÇO W. R. 1999: Some remarks about *Ananteris festae* Borelli, 1899 and description of a new species of *Ananteris* Thorell from Ecuador (Scorpiones, Buthidae). *Entomol. Mitt. Zool. Mus. Hamburg* 13(159): 95-100.
- LOURENÇO W. R. 1999: On the phylogenetic position of the genus *Birulatus* Vachon, 1973 (Scorpiones, Buthidae) and redescription of *Birulatus haasi*. *Zool. Middle East* 18: 109-113.
- LOURENÇO W. R. 1999: A new species of *Grosphus* Simon (Scorpiones, Buthidae), the first record of an intertidal scorpion from Madagascar. *Entomol. Mitt. Zool. Mus. Hamburg* 13(161): 133-138.
- LOURENÇO W. R. 1999: A new species of *Tityus* Koch, 1836 (Chelicerata, Scorpiones, Buthidae) from department Cesar in Colombia. *Rev. Arachnol.* 13(1): 1-6.
- LOURENÇO W. R. 1999: Complementary notes on the phylogenetic position of the genus *Lychasoides* Vachon, 1973, and redescription of *Lychasoides amieti* (Chelicerata, Scorpiones, Buthidae). *Rev. Arachnol.* 13(1): 7-13.
- LOURENÇO W. R. 1999: Biogeography, biodiversity and old collections a new genus and species of buthid scorpion from Congo, found in the collections of the "Muséum National d'Histoire Naturelle, Paris". *Biogeographica* 75(4): 187-192.
- LOURENÇO W. R. 1999: Considérations taxonomiques sur le genre *Hadogenes* Kraepelin, 1894; création des Hadogeninae subfam. n. et description d'une espèce nouvelle de l'Angola (Scorpiones, Scorpionidae, Hadogeninae). *Rev. Suisse Zool.* 106(4): 929-938.
- LOURENÇO W. R. 1999: Notes on the scorpions collected during the Fuhrmann's expedition to Colombia and described by Kraepelin. *Entomol. Mitt. Zool. Mus. Hamburg* 13(161): 123-132.
- LOURENÇO W. R. 1999: Origines et affinités des scorpions des Grandes Antilles: Le cas particulier des éléments de la famille des Buthidae. *Biogeographica* 75(3): 131-144.
- LOURENÇO W. R. 1999: New species of *Ananteris* from the north of Chocó, Colombia (Scorpiones: Buthidae). *An. Inst. Biol. Univ. Nac. Mexico, ser. Zool.* 70(2): 93-98.
- LOURENÇO W. R. 1999: Un nouveau genre et une nouvelle espèce de scorpion d'Egypte, appartenant à la famille des Buthidae Simon. *Rev. Suisse Zool.* 106(3): 591-598.
- LOURENÇO W. R. 2000: Confirmation de la présence du genre *Brachistosternus* Pocock (Scorpiones, Bothriuridae) au Brésil et description d'une espèce nouvelle. *Rev. Arachnol.* 13(5): 93-100.
- LOURENÇO W. R. 2000: Panbiogéographie, les familles des scorpions et leur répartition géographique. *Biogeographica* 76(1): 21-39.
- LOURENÇO W. R. 2000: Synopsis of the Colombian species of *Tityus* Koch (Chelicerata, Scorpiones, Buthidae), with descriptions of three new species. *Journal of Natural History* 34: 449-461.

- LOURENÇO W. R. 2000: Scorpion diversity and endemism in Madagascar implication for conservation programs. *Divers. Endém. Madagascar* 2000: 355-366.
- LOURENÇO W. R. & CLOUDSLEY-THOMPSON J. L. 1999: Variation in energy spent on reproduction between forest and savanna populations of *Pandinus imperator* (Koch) (Scorpiones, Scorpionidae) in the Ivory Coast. *Bull. Br. Arachnol. Soc.* 11(4): 136-138.
- LOURENÇO W. R. & CLOUDSLEY-THOMPSON J. L. 1999: Discovery of a sexual population of *Tityus serrulatus*, one of the morphs within the complex *Tityus stigmurus* (Scorpiones, Buthidae). *J. Arachnol.* 27(1): 154-158.
- LOURENÇO W. R. & CUELLAR O. 1999: A new all-female scorpion and the first probable case of arrhenotoky in scorpions. *J. Arachnol.* 27(1): 149-153.
- LOURENÇO W. R. & GOODMAN S. M. 1999: Taxonomic and ecological observations on the scorpions collected in the Forest of Ankazomivady-Ambositra and on the "RS d'Ivoibile", Madagascar. *Rev. Biol. Trop.* 47(3): 475-482.
- LOURENÇO W. R. & HUBER D. 1999: One more new species of *Lychas* Koch, 1845 (Chelicerata, Scorpiones, Buthidae) from Sri Lanka. *Entomol. Mitt. Zool. Mus. Hamburg* 13(159): 23-27.
- LOURENÇO W. R. & HUBER D. 1999: Additions to the scorpion faunas of Trinidad and Tobago. *Rev. Suisse Zool.* 106(1): 249-267.
- LOURENÇO W. R. & HUBER D. 2000: Two new species of scorpions (Scorpiones, Buthidae) of the genus *Paraorthochirus* Lourenço & Vachon from Oman. *Zool. Middle East* 20: 137-144.
- LOURENÇO W. R. & MONOD L. 1999: Confirmation de la validité du genre *Hormiops* Fage, 1933 avec redescription d'*Hormiops davidovi* Fage, 1933 (Scorpiones, Ischnuridae). *Zoosystema* 21(2): 337-344.
- LOURENÇO W. R. & MONOD L. 1999: Redescription of *Compsobuthus rugosulus* (Pocock, 1900) (Scorpiones, Buthidae) based on specimens from Pakistan. *Rev. Suisse Zool.* 105(4): 789-796.
- LOURENÇO W. R. & MONOD L. 1999: A new species of *Ananteris* Thorell from French Guyana (Scorpiones, Buthidae). *Rev. Suisse Zool.* 106(2): 301-306.
- LOURENÇO W. R. & MONOD L. 2000: Description of a new genus and species of Scorpion (Bothriuridae) from Brazil. *Ekológia (Bratislava)* 19(suppl. 3): 145-152.
- LOWE G. 2000: A new species of *Babycurus* (Scorpiones: Buthidae) from northern Oman. *Entomol. news* 111: 185-192.
- PERETTI A. V. & ACOSTA L. E. 1999: Comparative analysis of mating in scorpions: the post-transfer stage in selected Argentinian bothriurids (Chelicerata, Scorpiones, Bothriuridae). *Zool. Anz.* 237: 259-265.
- PERETTI A. V., ACOSTA L. E. & MARTÍNEZ M. A. 2000: Comportamiento de apareamiento en tres especies de *Bothriurus* del grupo *prospicuus*: estudio comparado y su relación con *Bothriurus flavidus* (Scorpiones, Bothriuridae). *Rec. Arachnol.* 13(5): 73-91.

References

- KOVARÍK F. 1998: *Štíři [Scorpiones]*. Jihlava (Czech Republic): Publishing House "Madagaskar", 176 pp (in Czech).
- SANTIAGO-BLAY J. A. 1993: The scorpions of Puerto Rico and Hispaniola. *American Arachnol.* 47: 6-7.
- VACHON M. 1949: Études sur les Scorpions. *Arch. Inst. Pasteur Algér* 27(1; 2): 66-100; 134-169.
