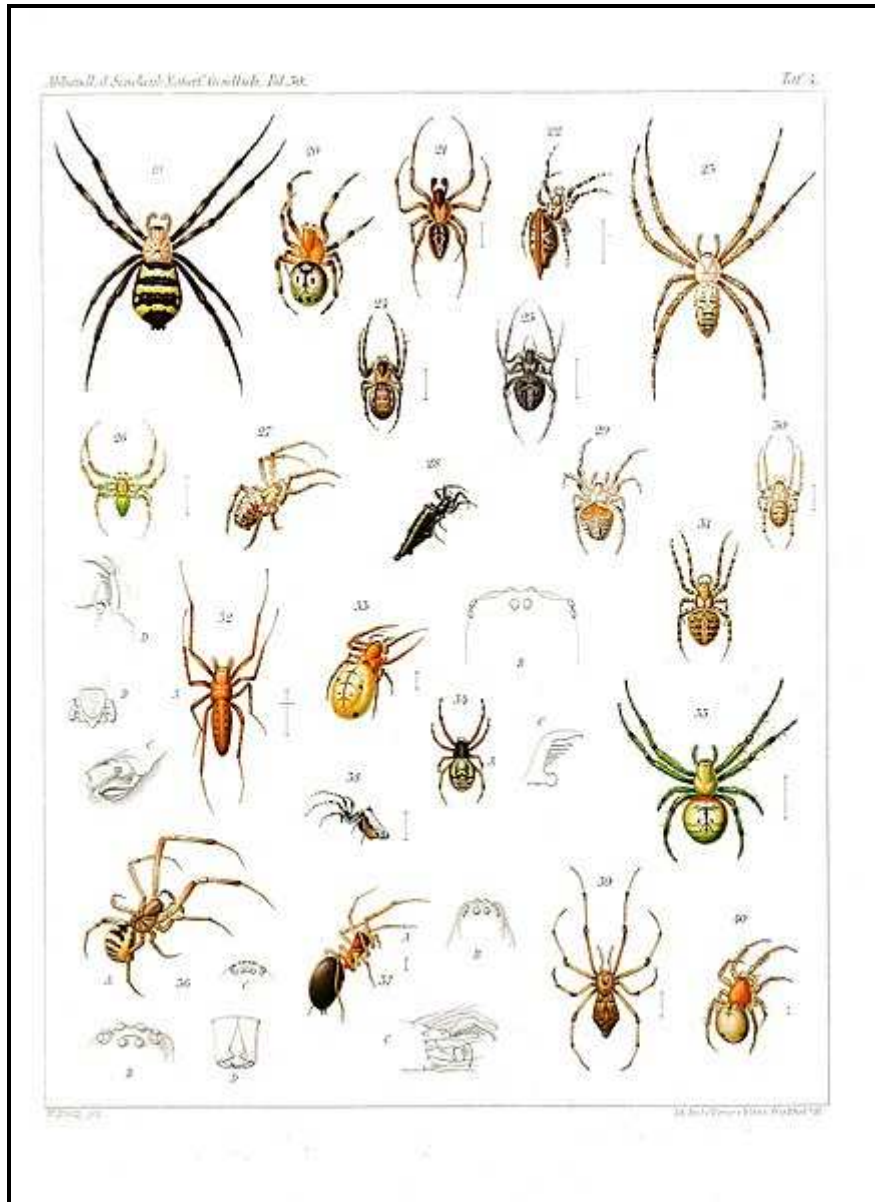


# ARACHNIDES

BULLETIN DE BIBLIOGRAPHIE ET DE RECHERCHES



## WORLDWIDE BIBLIOGRAPHY OF SCORPIONS. 2020

Gérard DUPRE

- ABD EL-ATTI M., EL-QASSAS J.A., GABEL-RAB A.G., SARHAN M.S. & DESOUKY M., 2020. Morphology, histology, histochemistry and fine structure of venom apparatus of the medically relevant scorpion, *Leiurus quinquestriatus*. *Bioscience Research*, 17 (2): 1274-1288.
- ABIDI H., SADINE S.E. & HOUHAMDI M., 2020. Description of the female of *Buthus aures* Lourenço & Sadine, 2016 (Scorpiones: Buthidae), with its current distribution in East Algeria. *Serket*, 17 (3): 176-182.
- ABOSHAALA F., BADRY A. & SADINE S.E., 2020. Ecological considerations on *Buthiscus bicalcaratus* Birula, 1905 with a new locality in northern Libya (Scorpiones, Buthidae). *Revista Ibérica de Aracnologia*, 36: 181-183.
- ABREU C.B., BORDON K.C.F., CERNI F.A., OLIVEIRA I.S., BALENZUELA C., ALEXANDRE-SILVA G.M., ZOCCAL K.F., REIS M.B., WIEZEL G.A., PEIGNEUR S., PINHEIRO-JUNIOR E.L., TYTGAT J., CUNHA T.M., QUINTON L., FACCIOLI L.H., ARANTES E.C., ZOTTICH U. & PUCCA M.B., 2020. Pioneering study on *Rhopalurus crassicauda* scorpion venom: Isolation and characterization of the major toxin and hyaluronidase. *Frontiers in Immunology*, 11: 2011.
- ABROUG F., OUANES-BESBES L., TILOUCHE N. & EL ATROUS S., 2020. Scorpion envenomation: state of the art. *Intensive Care Medicine*, 46: 401-410.
- ADILARDI R.S., OJANGUREN AFFILASTRO A.A., MARTI D.A. & MOLA L.M., 2020. Chromosome puzzle in the southernmost populations of the medically important scorpion *Tityus bahiensis* (Perty, 1833) (Buthidae), a polymorphic species with striking structural rearrangements. *Zoologischer Anzeiger*, 288: 139-150.
- ADROVER A., 2020. Accidentes con escorpiones en Costa Rica: Caracterización de la intoxicaciones causadas por *Centruroides edwardsii* (Scorpiones: Buthidae) a nivel nacional en 2018 y percepción de los escorpiones en una comunidad rural de Alajuela. Magister Univ. San José, 151pp.
- AHADI M., BEHDANI M., SHAHBAZZADEH D. & KAZEMI-LOMEDASHT F., 2020. Cloning and expression of two metalloproteinase inhibitors of *Hemiscorpius lepturus* (Khuzestan dangerous scorpion). *Razi Journal of Medical Sciences*, 26 (11): 9-19.
- AHMADI S., KNERR J.M., ARGEMI L., BORDON K.C.F., PUCCA M.B., CERNI F., ARANTES E.C., ÇALIŞKAN F. & LAUSTSEN A.H., 2020. Scorpion venom: Detriments and benefits. *Biomedicines*, 8 (5): 118.
- AHMED E.T.E., MEHANY M.M. & AHMED N.A., 2020. Effect of teaching program on Nurses' performance about scorpion sting at Medical Emergency Unite. *Assiut Scientific Nursing Journal*, 8 (20): 105-113.
- AHMED R.Z. & BOUAFIA A., 2020. The verification of the efficacy of the polyspecific antiscorpionic serum against three scorpions in El Oued region. *Asian Journal of Research Chemistry*, 13 (5): 376-382.
- AIRD S.D., 2020. Introduction to the toxins special issue on identification and functional characterization of novel venom components. *Toxins*, 12 (5): 336.
- AKBARI A., YAGMUR E.A., MORADI M. & JAFARI N., 2020. Contributions to the scorpion fauna of Iran. Part I. Records of genus *Hottentotta* Birula, 1908 (Arachnida: Scorpiones: Buthidae). *Serket*, 17 (3): 284-305.
- AKRAM M., MECKE S., DHAKATE P.M. & VASHISTHA G., 2020. Predation of a scorpion by a Kashmir rock agama (*Laudakia tuberculata*) in Nainital, India. *Herpetology Notes*, 13: 1095-1097.

- ALAJMI R., AL-GHAMDI S., BARAKAT I., MAHMOUDI A., ABDON N., AL-AHIDIB M. & ABDEL-GABER R., 2020. Antimicrobial activity of two novel venoms from Saudi Arabian scorpions (*Leiurus quinquestriatus* and *Androctonus crassicauda*). *International Journal of Peptide Research and Therapeutics*, 26: 67-74.
- AL-ASMARI A.K., ABBASMANTHIRI R., ABDO OSMAN N.M. & AL-ASMARI B.A., 2020. Endangered Saudi Arabian plants having ethnobotanical evidence as antidotes for scorpion envenoming. *International Journal of Phytomedicine and phytotherapy*, 6: 53.
- AL-AZAWI Z.N.N., 2020. The measurement and histological study of the venom gland and aculus sting in Iraqi *Scorpio maurus* Linaneus, 1758. *International Journal of Pharmaceutical Research*, 12: 825-828.
- AL-AZAWI Z.N.N., 2020. Behavior study of mating and caring young in scorpions *Androctonus crassicauda* (Scorpiones: Buthidae). *International Journal of Advances in Chemical engineering and Biological Sciences*, 6 (1): 1-4.
- ALIKHANI H.K., BIDMESHKIPÖUR A. & ZARGAN J., 2020. Cytotoxic and apoptotic induction effects of the venom of Iranian scorpion (*Odontobuthus bidentatus*) in the hepatocellular carcinoma cell line (HepG2). *International Journal of Peptide Research and Therapeutics*, 26: 2475-2484.
- ALIKHANI H.K., ZARGAN J., BIDMESHKIPOUR A., MOHAMMADI A.H.N., HOSSEINPOUR M., HEYDARI A. & HAJIZADEH A., 2020. Antibacterial activity of the Iranian scorpion's crude venom (*Odontobuthus bidentatus*) on gram-positive and gram-negative bacteria. *Iranian Journal of Toxicology*, 14 (2): 105-110.
- AL-MALKI E. & ABDELSATER N., 2020. In vitro scolicidal effects of *Androctonus crassicauda* (Olivier, 1807) venom against the protoscolices of *Echinococcus granulosus*. *Saudi Journal of Biological Sciences*, 27 (7): 1760-1765.
- ALMEIDA T., SOUZA C., SALOMAO R., FOERSTER S., De SOUZA A., POURA G. & LIRA A., 2020. Capacidade de submersão em *Tityus neglectus* Mello-Leitão, 1932 (Scorpiones, Buthidae) mediante indução de estresse. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- ALQAHTANI A.R. & BADRY A., 2020. Interspecific phylogenetic relationship among different species of the genus *Buthacus* (Scorpiones: Buthidae) inferred from 16S rRNA in Egypt and Saudi Arabia. *Zoology in the Middle East*, 66 (2): 175-185.
- ALQAHTANI A.R. & BADRY A., 2020. Genetic diversity among different species of the genus *Leiurus* (Scorpiones: Buthidae) in Saudi Arabia and the Middle East. *Saudi Journal of Biological Sciences*, 27: 3348-3353.
- ALTINBILEK E., YUSUFOGLU K., ALGIN A. & COLAK S., 2020. Comparison of antivenom effects between pediatric and adult patients presented to emergency department with scorpion stings. *Medicine Science*, 9 (1): 109-113.
- ALVES FURTADO A.A., DANIELE-SILVA A., da SILVA-JUNIOR A.A. & de FREITAS FERNADES-PEDROSA M., 2020. Biology, venom composition, and scorpionism induced by Brazilian scorpion *Tityus stigmurus* (Thorell, 1876) (Scorpiones: Buthidae): A mini-review. *Toxicon*, 185: 36-45.
- AMIRGHOLAMI N., KARAMPOUR N.S., GHADIRI A., MOGHADAM A.T., DEHCESHMEH M.G. & PIPELZADEH M.H., 2020. *A. crassicauda*, *M. eupeus* and *H. lepturus* scorpion venoms initiate a strong *in vivo* anticancer immune response in CT26-tumor mice model. *Toxicon*, 180: 31-38.
- APARECIDO da SILVA A., de ARAUJO LIRA A.F. & ROHDE C., 2020. Efeito genotóxico do esgoto de lixo doméstico em escorpiões *Tityus pusillus* oriundos da área de Proteção Ambiental Aldeia-Beberibe, Pernambuco, Brasil. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- AVELINO de MEDEIROS A.S., TORRES-RÊGO M., FERREIRA LACERDA A., OLIVEIRA ROCHA H.A., TABOSA do EGITO E.S., CORNELIO A.M., TAMBOURGI D.V., de FREITAS FERNADES-PEDROSA M. & da SILVA-JUNIOR A.A., 2020. Self-assembled cationic-covered

- nanoemulsion as a novel biocompatible immunoadjuvant for antiserum production against *Tityus serrulatus* venom. *Pharmaceutics*, 12 (10): E927.
- AYREY R.F., 2020. A new species of *Vaejovis* from Mingus Mountain, northern Arizona (Scorpiones: Vaejovidae). *Euscorpius*, 303: 1-14.
- AYREY R.F. & MYERS B., 2020. Description of the male of *Wernerius mumai* (Sissom, 1993) from western Arizona, with data on reproduction (Scorpiones: Vaejovidae). *Euscorpius*, 317: 1-11.
- BABAIE M., PANAH A.G., MEHRABI Z. & MOLLAEI A., 2020. Partial purification and characterization of antimicrobial effects from snake (*Echis carinatus*), scorpion (*Mesobuthus eupeus*) and bee (*Apis mellifera*) venoms. *Iranian Journal of Medical Microbiology*, 14 (5): 450-467.
- BALLARIN F., SALMASO R. & LATELLA L., 2020. The arachnological collections of the Museo Civico di Storia Naturale of verona (Italy): an overview. *Arachnologische Mitteilungen*, 60: 23-26.
- BALLESTEROS J.A. & SHARMA P.P., 2020. The phylogeny of Chelicerata. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- BARBOSA Dos SANTOS A. & RIBEIRO de ALBUQUERQUE C.M., 2020. Behavioural changes in *Tityus stigmurus* (Thorell, 1876) (Scorpiones: Buthidae) exposed to a pyrethroid insecticide. *Journal of Ethology*, 38: 301-310.
- BARAHOEI H., NAVIDPOUR S., ALIABADIAN M., SIAHSARVIE R. & MIRSHAMSI O., 2020. Sexual dimorphism in the scorpions of the genus *Odontobuthus* Vachon, 1950 (Scorpiones: Buthidae). *Iranian Journal of Animal Biosystematics*, 16 (1): 1-15.
- BARAHOEI H., NAVIDPOUR S., ALIABADIAN M., SIAHSARVIE R. & MIRSHAMSI O., 2020. Scorpions of Iran (Arachnida: Scorpiones): Annotated checklist, DELTA database and identification key. *Journal of Insect Biodiversity and Systematics*, 6 (4): 375-474.
- BARRAZA MENDEZ J., CAMPOY A.N. & RIVADENEIRA M., 2020. Crecer o no crecer: evolucion del tamaño en el género *Brachistosternus* (Scorpiones, Bothriuridae) de Suramérica. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- BARRIOS MONTIVERO A.E., MORALES F.L. & SALAS L.B., 2020. Aportes al conocimiento de escorpiones, pseudoescorpiones, solífugos y opiliones (Arachnida) en el departamento Ambato, provincia de Catamarca, Argentina. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- BAWASKAR H.S., PATARE P. & BAWASKAR P., 2020. Scorpion sting with ST-segment elevation. *JAMA Internal Medicine*, 180 (12): 1689-1690.
- BAYATZADEH M.A., MIRAKABADI A.Z., BABAEI N., DOULAH A.H. & DOOSTI A., 2020. Characterization, molecular modeling and phylogenetic analysis of a long mammalian neurotoxin from the venom of the Iranian scorpion *Androctonus crassicauda*. *Biologia*, 75: 1029-1041.
- BECERRIL B., RIANO L. & POSSANI L.D., 2020. Generation of a recombinant antivenom against scorpion stings in Mexico. *Toxicon*, 177 (suppl.1): S4.
- BEDOYA-ROQUEME E. & QUIROS-RODRIGUEZ J.A., 2020. On current status of the scorpion fauna (Chelicerata: Scorpiones) from Cordoba, Colombian Caribbean: A checklist. *Species*, 21 (67): 73-83.
- BEHDANI M., SHEHBAZZADEH D. & KAZEMI-LOMEDASHT F., 2020. Cloning and expression of two metalloproteinase inhibitors of *Hemiscorpius lepturus* (Khuzestan dangerous scorpion) (in Persian). *Razi Journal of Medical Sciences*, 26 (11): 9-19.
- BENABDELLAH F.Z., SOULAYMANI A., MOKHRATI A., SOULAYMANI-BENCHEIKH R., KHADMAOUI A. & HAMI H., 2020. Economic evaluation of the direct cost resulting from childhood poisoning in Morocco: micro-costing analysis. *Archives of Public Health*, 59.
- BEN AISSA R., OTHMAN H., VILLARD C., PEIGNEUR S., MLAYAH-BELLAOUNA S., ABDELKAFI-KOUBAA Z., MARRAKCHI N., ESSAFI-BENKHADIR K., TYTGAT J., LUIS L. & SRAIERI-ABID N., 2020. AaHIV a sodium channel scorpion toxin inhibits the proliferation of

- DU145 prostate cancer cells. *Biochemical and Biophysical Research Communications*, 521 (2): 340-346.
- BEN YEKHLEF R., FELICORI L., SANTOS L.H., OLIVEIRA C.F.B., FADHLOUN R., TORABI E., SHAHBAZZADEH D., BAGHERI K.P., FERREIRA R.S. & BORCHANI L., 2020. Antigenic and substrate preference differences between scorpion and spider dermonecrotic toxins, a comparative investigation. *Toxins*, 12-631: 1-19.
- BERALDO-NETO E., ALVES de FREITAS L., PIMENTA D.C., LEBRUN I. & NENCIONI A.L.A., 2020. Tb1, a neurotoxin from *Tityus bahiensis* scorpion venom, induces epileptic seizures by increasing glutamate release. *Toxins*, 12 (2): 65.
- BLASCO-AROSTEGUI J., GARCIA-GILA J. & FRANCKE O.F., 2020. Ecological aspects of the interactions between *Centruroides limbatus* and *Tityus ocelote* (Scorpiones: Buthidae) in a Caribbean forest of Costa Rica. *Revista Mexicana de Biodiversidad*, 91: 1-14.
- BOMBA A., FAVARO P., HAUS R., AIGLE L., JEAN F.X., DAUPHIN I., GUIGON P., FONTAINE B., PUIDUPIN M, DEMONCHEAUX J.P. & LARRECHE S., 2020. Review of scorpion stings and snakebites treated by the French Military Health Service during overseas operations between 2015 and 2017. *Wilderness & Environmental Medicine*, 31 (2): 174-180.
- BORGES A., LOMONTE B., ANGULO Y., ACOSTA de PATONI H., PASCALE J.M., OTERO R., MIRANDA R.J., DE SOUSA L., GRAHAM M.J., GOMEZ A., PARDAL P.P.O., ISHIKAWA E., BONILLA F., CASTILLO A., MACHADO de AVILA R.A., GOMEZ J.P. & CARO-LOPEZ J.A., 2020. Venom diversity in the neotropical scorpion genus *Tityus*: Implications for antivenom design emerging from molecular and immunochemical analyses across endemic areas of scorpionism. *Acta Tropica*, 204: 105346.
- BORGES A., ROJAS de ARIAS A., de ALMEIDA LIMA S., LOMONTE B., DIAZ C., CHAVEZ-OLORTEGUI C., GRAHAM M.R., KALAPOTHAKIS E., CORONEL C. & de ROODT A.R., 2020. Genetic and toxinological divergence among populations of *Tityus trivittatus* Kraepelin., 1898 (Scorpiones: Buthidae) inhabiting Paraguay and Argentina. *PLoS Neglected Tropical Diseases*, 14 (12): 1-27.
- BOUAZIZ M., BEN HAMIDA C., CHELLY H., BAHLOUL M. & KALLEL H., 2020. Dobutamine in the treatment of severe scorpion envenoming. *Toxicon*, 182: 54-58.
- BOUBEKEUR K., L'HADJ M. & SELMANE S., 2020. Demographic and epidemiological characteristics of scorpion envenomation and daily forecasting of scorpion sting counts: The case of Touggourt in Algeria. *Epidemiology and Health*, 42: 1-9.
- BRAGA-PEREIRA G.F., ARAUJO J.L.F. & SANTOS A.J., 2020. Esforço reprodutivo em populações sexuada e partenogenética do escorpião *Tityus serrulatus* (Scorpiones: Buthidae). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- BRAGA-PEREIRA G.F. & SANTOS A.J., 2020. Competição entre machos de *Tityus serrulatus* (Scorpiones: Buthidae): diferentes estratégias de comportamento para acalasar com uma fêmea. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- BRAGA-PEREIRA G.F. & SANTOS A.J., 2020. Odor perdido: ausência de produção de feromônios em fêmeas de populações partenogenéticas do escorpião amarelo *Tityus serrulatus* (Scorpiones: Buthidae). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- BRUINS H.J., JONGMANS T. & van der PLICHT J., 2020. Ancient runoff farming and soil aggradation in terraced wadi fields (Negev, Israel): Obliteration of sedimentary strata by ants, scorpions and humans. *Quaternary International*, 545: 87-101.
- BUITRAGO J.R., ESGUERRA I.S., ROJAS ÁVILA N.M., 2020. Scorpion envenoming by *Tityus (atreus) vaissadei* (Buthidae) in Santander, Colombia. *Toxicon*, 177 (suppl.1): S30-S31.
- BUREGIO V., MOURA G. & LIRA A., 2020. A densidade e frequência alimentar modulam a ocorrência de canibalismo em *Tityus pusillus* Pocock, 1893?. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.

- BUREGIO V., MOURA G. & LIRA A., 2020. Efeito da densidade de *Tityus pusillus* sobre a atividade de forrageio de *Ananteris mauryi* em fragmentos de Floresta Atlântica. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- CAMARA LUNA N.M., Da SILVA M.B., de ARAUJO LIRA A.F. & DIONISIO-da-SILVA W., 2020. Hábito fossorial e repertório comportamental em espécies do gênero *Bothriurus* Peters, 1861. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- CAMPERI S.A., ACOSTA G., BARREDO G.R., IGLESIAS-GARCIA L.C., da SILVA CALDEIRA C.A., MARTINEZ-CERON M.C., GIUDICISSI S.L., CASCONO O. & ALBERICIO F., 2020. Synthetic peptides to produce antivenoms against the Cys-rich toxins of arachnids. *Toxicon*, 6: 100038.
- CASTANEDA-GOMEZ J., GONZALEZ-ACOSTA C., MORENO-GARCIA M. & VILLEGAS-TREJO A., 2020. Dosis letal y diagnostica de carbamatos para *Centruroides limpidus* Karsch, 1879 (Scorpiones; Buthidae), de Morelos, México. *Salud Publica de México*, 62 (3): 234-235.
- CASTANO S., LOPEZ-ALVAREZ D. & FIERRO L., 2020. Metatranscriptome analysis of microbial community in venomous glands of three scorpions of Colombia. *Toxicon*, 177 (suppl.1): S50.
- ÇELIK E. & DURSUN A., 2020. Evaluation des cas pédiatriques présentant des piqûres de scorpion: Expérience d'un hôpital universitaire (in Turkish). *Bozok Medical Journal*, 10 (2): 60-66.
- CHEN Y., SUN F., LI S., GAO M., WANG L., SARHAN M., ABDEL-RAHMAN M.A., LI W., KWOK H.F., WU Y. & CAO Z., 2020. Inhibitory activity of a scorpion defensin BmKDfsin3 against hepatitis C virus. *Antibiotics (Basel)*, 9 (1): 33.
- CHEVALIER J. & DEWYNTER M., 2020. Inventaire & cartographie des scorpions de la Martinique. Technical report, march 2020, 39 pp.
- CHIPPAUX J.P., 2020. Envenimations: De quelles informations avons-nous besoin aujourd'hui et comment présenter les données? *Bulletin de la Société de Pathologie Exotique*, 113 (1): 1-4.
- CHIPPAUX J.P., CELIS A., BOYER L. & ALAGON P., 2020. Factors involved in the resilience of incidence and decrease of mortality from scorpion stings in Mexico. *Toxicon*, 188: 65-75.
- CHIPPAUX J.P. & LARRECHE S., 2020.. In Memoriam: Max Goyffon (1935-2020). *Toxicologie Analytique et Clinique*, 32 (4): 242-244.
- CHRISTIE J., MADSEN E., WAENGSOTHORN S. & JONES M.D., 2020. Inverting the food web: The predation of an adult colubrid snake *Sibynophis triangularis*, by a scorpion *Heterometrus laoticus* in the Sakaerat Biosphere Reserve. *Captive & Field Herpetology*, 4 (1): 1-5.
- CID-URIBE J.I., VEYTIA-BUCHELI J.I., ROMERO-GUTIERREZ T., ORTIZ E. & POSSANI L.D., 2020. Scorpion venomics: A 2019 overview. *Expert review of Proteomics*, 17 (1): 67-83.
- ÇIĞDEM E.I. & ÇELIKKAYA M.E., 2020. Administration of a second dose antivenom in the early period: Is it effective in scorpion stings? *Journal of Pediatric Research*, 7 (2): 26-31.
- COOKE S.C., ANCHUNDIA D., CATON E., HASKELL L.E., JÄGER H., KALKI Y., MOLLA O., RODRIGUEZ J., SCHRAMER T.D., WALENTOWITZ A. & FESSL B., 2020. Endemic species predation by the introduced smooth-billed ani in Galapagos. *Biological Invasions*, 22: 2113-2120.
- CORDEIRO F.A., AMORIM F.G., BOLDRINI-FRANÇA J., PINHEIRO-JUNIOR E.L., CARDOSO I.A., PEIGNEUR S., TYTGAT J. & ARANTES E.C., 2020. Expression of an A-KTX from *Tityus serrulatus* venom in *Pichia pastoris* yeast and its preliminary characterization. *Toxicon*, 177 (suppl.1): S32.
- COTA-ARCE J.M., ZAZUETA-FAVELA D., DIAZ-CASTILLO F., JIMENEZ S., BERNALDEZ-SARABIA J., CARAM-SALAS N.L., DAN K.W.L., ESCOBEDO G., LICEA-NAVARRO A.F., POSSANI L.D. & DE LEON-NAVA M.A., 2020. Venom components of the scorpion *Centruroides limpidus* modulate cytokine expression by T Helper lymphocytes: Identification of ion channel-related toxins by mass spectrometry. *International Immunopharmacology*, 84: 106505.
- CREWS S.C. & ESPOSITO L.A., 2020. Towards a synthesis of the Caribbean biogeography of terrestrial arthropods. *BMC Evolutionary Biology*, 20 (12): 1-27.

- CUNHA H., RODRIGUES A., FOERSTER S., MOURA G. & LIRA A., 2020. Diferenças na ninhada entre populações assexuadas e sexuadas de *Tityus stigmurus* (Thorell, 1876). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- CUNHA H., SANTOS A., MOURA G. & LIRA A., 2020. Influência do habitat sobre o comportamento predatório em escorpiões. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- CUPUL-MAGAÑA F.G. & MOUNTJOY J.B., 2020. Imágenes de escorpiones en la cerámica Aztatlán de un sitio arqueológico en la costa norte de Jalisco, México. *Revista Ibérica de Aracnología*, 36: 188-189.
- CVETKOVSKA-GJORGJEVSKA A., PRELIC D., HRISTOVSKI S., SLAVEVSKA-STAMENKOVIC V. & RISTOVSKA M., 2020. Altitude and vegetation effects on epigaeic arthropod fauna from Belasica Mt. (South-East Macedonia). *MASA*, 41 (1): 5-12.
- CZAYKOWSKY C., CARRITTE M., COOPER P., MANGUNSONG J., PEEKE J., CORBIT A.G. & NELSEN D.R., 2020. The progressive effects of electrical extraction on venom composition and sexual venom variation in the southern devil scorpion *Vaejovis carolinianus*. *Toxicon*, 182 (supp.1): S34.
- CZAYKOWSKY C., CARRITTE M., COOPER P., MANGUNSONG J., PEEKE J., CORBIT A.G. & NELSEN D.R., 2020. Preliminary investigation of the effects of sex and electrical venom extraction on venom composition in the Southern devil scorpion, *Vaejovis carolinianus*. Southern Adventist University, 28pp.
- DAACHI F., ADI-BESSALEM S., MEGDAD-LAMRAOUI A. & LARABA-DJEBARI F., 2020. Immune-toxicity effects of scorpion venom on the hypothalamic pituitary adrenal axis during rest and activity in a rodent model. *Comparative Biochemistry and Physiology - Part C- Toxicology*, 235: 108787.
- DALEVEDO G.A., SANFELICE R.A., BOSQUI L.R., MACHADO L.F., ASSOLINI J.P., DEPIERI CATANEO A.H., NAVARRO I.T., BORDIGNON J., CÂNDIDO D.M., CONCHON-COSTA I., PAVANELLI W.R., KWASNIEWSKI F.H., IDESSANIA NAZARETH COSTA I.N., 2020. Peçonha de *Tityus bahiensis* reduz proliferação de *Toxoplasma gondii* (CEPA RH) e produção de IL-8 NAS células HeLa. *Capa*, 8 (2): 167-179.
- Da MATA E.C.G., OMBREDANE A., JOANITTI G., KANZAKI L.I.B. & SCHWARTZ E.F., 2020. Antiretroviral and cytotoxic activities of *Tityus obscurus* synthetic peptide. *Archiv der Pharmazie*, 353 (11): 1-22.
- DAS B., PATRA A. & MUKHERJEE A.K., 2020. Correlation of venom toxinome composition of Indian red scorpion (*Mesobuthus tamulus*) with clinical manifestation of scorpion stings: Failure of commercial antivenom to immune-recognize the abundance of low molecular mass toxins of this venom. *Journal of Proteome Research*, 19 (4): 1847-1856.
- Da SILVA MORAES H., LIMA CAVALCANTE E.L., NASCIMENTOS MACHADO J.A. & MACHADO E.O., 2020. Avaliação do etnoconhecimento urbano e a relação da população com aracnídeos em um município da Amazônia Ocidental (Cruzeiro do Sul, Acre, Brasil). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- DAVISON A.M., BROWN T.W. & ARRIVILLAGA C., 2020. Notes on the diet and reproduction of the bark scorpion *Centruroides gracilis* (Scorpiones: Buthidae) on Utila Island, Honduras. *Euscorpius*, 314: 1-7.
- De ALMEIDA LIMA C., LEAL A.L.R., APARECIDA de LIMA MANGUEIRA S., De MELO COSTA S. & SANTOS D.F., 2020. Vigilância em saúde: acidentes e óbitos provocados por animais peçonhentos na região sudeste - Brasil, 2005-2015. *Archivos*, 12 (1): 20-28.
- De ARAUJO LIRA A.F., ALMEIDA F.M.F. & ALBUQUERQUE C.M.R., 2020. Reaction under the risk of predation: effects of age and sexual plasticity on defensive behavior in scorpion *Tityus pusillus* (Scorpiones: Buthidae). *Journal of Ethology*, 38: 13-19.

- De ARAUJO LIRA A.F., BADILLO-MONTAÑO R., LIRA-NORIEGA A. & RIBEIRO de ALBUQUERQUE C.M., 2020. Potential distribution patterns of scorpions in north-eastern Brazil under scenarios of future climate change. *Austral Ecology*, 45 (2): 215-228.
- De ARAUJO LIRA A.F., DIONISIO-da-SILVA W., FOERSTER S. & CARVALHO L., 2020. Estado da arte do conhecimento ecológico sobre escorpiões sul-americanos. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- De ARAUJO LIRA A.F., FOERSTER S., SALOMAO R., PORTO T. & MOURA G., 2020. Efeitos da perturbação antrópica sobre a diversidade de escorpiões no nordeste brasileiro. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- De ARAUJO LIRA A.F., REGO F.N.A.A., SALAMAO R.P. & RIBEIRO de ALBUQUERQUE C.M., 2020. Effects of habitat quality on body size of the litter dwelling scorpion *Tityus pusillus* in fragmented rainforests of Brazil. *Journal of Arachnology*, 48 (3): ?
- De ARAUJO LIRA A.F., TEIXEIRA VIEIRA A.G. & OLIVEIRA R.F., 2020. Seasonal influence on foraging activity of scorpion species (Arachnida: Scorpiones) in a seasonal tropical dry forest remnant in Brazil. *Studies on Neotropical Fauna and Environment*, 55 (3): 226-232.
- De ARMAS L.F., 2020. First record of *Didymocentrus sanfelipensis* (Scorpiones: Diplocentridae) from Turiguano Island, Ciego de Avila, Cuba. *Euscorpius*, 301: 1-4.
- De ARMAS L.F., 2020. Scorpions of Puerto Rico and its satellite islands (Scorpiones: Buthidae, Diplocentridae): an annotated list, key for genera, and bibliography. *Euscorpius*, 311: 1-8.
- De ARMAS L.F., 2020. The preys of Cuban scorpions (Scorpiones: Buthidae, Diplocentridae). *Revista Ibérica de Aracnologia*, 37: 231-235.
- De ARMAS L.F., ALAYON GARCIA G., BARBA DIAZ R. & ALEGRE A., 2020. Aeras naturales de Cuba con mayor endemismo de Aracnidos (Chelicerata: Arachnida). *Revista Ibérica de Aracnologia*, 36: 35-47.
- De ARMAS L.F., ALEGRE A. & BARBA DIAZ R., 2020. Desarrollo historico de la aracnologia en Cuba (excluido Acari). Siglo XIX. *Revista Ibérica de Aracnologia*, 37: 137-146.
- De AZEVEDO GONZAGA L.E., BARBOSA F., MOURA G. & LIRA A., 2020. O efeito da dieta na duração do ciclo de vida do escorpião *Tityus pusillus* Pocock, 1893. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- De CASSIA COLLAÇÃO R., HYSLOP S., ROCHA T., DORCE V.A.C., ROWAN E.G. & ANTUNES E., 2020. Neurotoxicity of *Tityus bahiensis* (brown scorpion) venom in sympathetic vas deferens preparations and neuronal cells. *Archives of Toxicology*, 94:3315-3327.
- De CASTRO FIGUEIREDO BORDON K., COLOGNA C.T., FORNARI-BALDO E.C., PINHEIRO-JUNIOR E.L., CERNI F.A., AMORIM F.G., ANJOLETTE F.A.P., CORDEIRO F.A., WIEZEL G.A., CARDOSO I.A., GOBBO FERREIRA I., SOUSA de OLIVEIRA I., BOLDRINI-FRANÇA J., PUCCA M.B., BALDO M.A. & ARANTES E.C., 2020. From animal poisons and venoms to medicines: Achievements, challenges and perspectives in drug recovery. *Frontiers in Pharmacology*, 11: 1132.
- DEHGHAN Z., AYAT H. & AHADY A.M., 2020. Expression, purification and docking studies on IMe-AGAP first antitumor-analgesic like peptide from Iranian scorpion *Mesobuthus eupeus*. *Iranian Journal of Pharmaceutical Research*, 19 (3): 206-216.
- DEHGHANI R., KHAMEHCHIAN T., DEHGHANI A., LIMOEE M. & HOSSEINI H., 2020. Investigation of the behavioral and clinical effects of black scorpion venom in albino rats. *Iranian Journal of Toxicology*, 14 (3): 3-8.
- De OLIVEIRA CORIONALO E., GOMES SANTIAGO A.B., PORTELLA FILHO C.S.A., VASCONCELOS ARCANJO F.T., RIOS L.T., MEDEIROS DE ARAUJO L.R., ARAUJO DE AMORIM MEDEIROS M.A., CARNEIRO M.R., SILVA VIEIRA N.A., FACUNDO FILHO R.F., PINHO DE SOUSA S.E. & LEMOS DE BRITO R.L., 2020. Acidentes por picada de escorpião em Crato-Ce de 2013 a 2017. pp110-113. In "Inovação Tecnológica e o Dominio das Técnicas de Investigação na Medicina 2", Atena Editora, 137pp.



- De OLIVEIRA FLORES T.M., NUNES E.A.C., SOUZA SILVA P. & MIGLIOLO L., 2020. Rational design of analogs peptides from *Tityus serrulatus* scorpion toxin against pathogenic bacteria. *Toxicon*, 177 (suppl.1): S55-S56.
- De OLIVEIRA JOHN E.B., XAVIER M.A., CARLINI C.R. & TERMIGNONI C., 2020. Transcriptomic analysis of the venom gland from the scorpion *Bothriurus bonariensis*. *Toxicon*, 177 (suppl.1): S35.
- De OLIVEIRA YAMASHITA F., TORRES-REGO M., DOS SANTOS GOMES J.A., FELIX-SILVA J., RAMOS PASSOS J.G., DE SANTIS FGERREIRA L., DE SILVA-JUNIOR A.A., ZUCOLOTTO S.M. & DE FREITAS FERNANDES-PEDROSA M., 2020. Mangaba (*Hancornia speciosa* Gomes) fruit juice reeases acute pulmonary edema induced by *Tityus serrulatus* venom: Potential appliaction for auxiliary treatment of scorpion stings. *Toxicon*, 179: 42-52.
- DESALES-SALAZAR E., KHUSRO A., CIPRIANO-SALAZAR M., BARBABOSA-PLIEGO A. & RIVAS-CACERES R.R., 2020. Scorpion venoms and associated toxins as anticancer agents: Update on their application and mechanism of action. *Journal of Applied Toxicology*, 40 (10): 1310-1324.
- De SOUSA V.A., DANTAS Da SILVA T.T., De SOUSA F.D.A., MARQUES A.F.M. & MOREIRA B.A.A., 2020. Escorpiões de importância médica no estado da Paraíba, Brasil. *Evidência*, 20 (1): 57-67.
- DEZIANIAN S., ZARGAN J., GOUDARZI H.R., NOORMOHAMADI A.H., MOSAVI M., ALIKHANI H.K. & JOHARI B., 2020. In vitro study of *Hottentotta schach* crude venom anticancer effects on MCF-7 and Vero cell lines. *Iranian Journazl of Pharmaceutical Research*, 19 (1): 192-202.
- DI Z.Y. & QIAO S., 2020. *Scorpiops songi* sp.n. and key to species of *Scorpiops* from China (Scorpiones: Scorpiopidae). *Arthropoda Selecta*, 29 (3): 316-324.
- DI Z.Y. & QIAO S., 2020. *Euscorpiops lii* sp.nov. and a key of the genus *Euscorpiops* Vachon, 1980 (Scorpiones, Scorpiopidae) from China. *ZooKeys*, 968: 71-83.
- DIAZ C., BONILLA F., LOMONTE B., CAMACHO E., FORNAGUERA J. & SASA M., 2020. Comparative biochemical study of the venoms of scorpions *Tityus asthenes* and *Centruroides edwardsii* from Costa Rica. *Toxicon*, 177 (suppl.1): S46.
- DIAZ-GARCIA A. & VARELA D., 2020. Voltage-gated K<sup>+</sup>/Na<sup>+</sup> channels and scorpion venom toxins in cancer. *Frontiers in Pharmacology*, 11: 913.
- DIJAZI R., SHARAFI A., POURAHMAD J., VATANPOUR S., HOSSEINI M.J. & VATANPOUR H., 2020. The effects of *Hemiscorpius lepturus* induced-acute kidney injury on PGC-1 $\alpha$  gene expression: From induction to suppression in mice. *Toxicon*, 174: 57-63.
- DIOGUARDI M., CALORO G.A., LAINO L., ALOVISI M., SOVERETO D., CRINCOLI V., AIUTO R., DIOGUARDI A., DE LILLO A., TROIANO G. & LO MUZIO L., 2020. Therapeutic anticancer uses of the active principles of "*Rhopalurus junceus*" venom. *Biomedicines*, 8 (10): 382.
- DIONISIO-da-SILVA W. & de ARAUJO LIRA A.F., 2020. Record of *Ananteris mauryi* (Scorpiones: Buthidae) preyed upon by *Ectatomma planidens* (Hymenoptera: Formicidae) in the Brazilian Atlantic Rainforest: Clarification. *Entomological News*, 129 (1): 105.
- DIONISIO-DA-SILVA W., De ARAUJO LIRA A.F., & da SILVA M.B., 2020. Padrão de dispersão de três espécies de escorpiões na ecoregião Caatinga. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- DIONISIO-DA-SILVA W., De ARAUJO LIRA A.F., & da SILVA M.B., 2020. Variações morfológicas em populações dos escorpiões *Bothriurus rochai* Mello-Leitão, 1932 e *Jaguajir rochae* (Borelli, 1910) na ecoregião Caatinga. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- DJILANI S., SADINE S.A. & KERBOUA K.E., 2020. Sérothérapie antiscorpionique: Efficacité clinique, aspects pré-cliniques, et perspectives d'une nanothérapie future. *Algerian Journal of Health Sciences*, 2 (supp.1): S112-S117.

- Do NASCIMENTO M., NETO E.B., FERREIRA do val PAULO M.E. & NENCIONI A.L.A., 2020. Exposure of lactating wistar rats to *Tityus bahiensis* scorpion venom: effects on cytokine and growth factor (bdnf) levels of offspring. *Toxicon*, 177 (suppl.1): S59.
- DROZD D., WOLF H. & STEMME T., 2020. Structure of the pecten neuropil pathway and its innervation by bimodal peg afferents in two scorpion species. *PloS One*, 15 (12): e0243753.
- DUENAS-CUELLAR R.A., CORREIA SANTANA C.J., MARTINS MAGALHAES A.C., PIRES O.R. Jr., FONTES W. & CASTRO M.S., 2020. Scorpion toxins and ion channels: Potential applications in cancer therapy. *Toxins*, 12 (5): 326.
- DUPRE G., 2020. Liste des travaux arachnologiques publiés en 2019. Arachnida: Scorpiones. *Arachnides*, 92: 1-23.
- DUPRE G., 2020. Nouveaux taxa de scorpions. 2019. *Arachnides*, 92: 24-32.
- DUPRE G., 2020. Liste des travaux arachnologiques publiés en 2019. Arachnida: Scorpiones (compléments). *Arachnides*, 93: 1-2.
- DUPRE G., 2020. Les scorpions termitophiles. *Arachnides*, 93: 3-7.
- DUPRE G. 2020. Nouvelle synthèse sur la répartition en France de *Tetratrichobothriurus flavicaudis* (De Geer, 1778) (Scorpiones : Euscorpiidae). *Arachnides*, 93: 8-13.
- DUPRE G., 2020. Les scorpions en linguistique. 2° partie. *Arachnides*, 93: 14-20.
- DUPRE G., 2020. De l'accès des types à la communauté scientifique. *Arachnides*, 94: 1-7.
- DUPRE G., 2020. Les prédateurs des scorpions (Arachnida: Scorpiones). *Arachnides*, 94: 8-32.
- DUPRE G., 2020. Les scorpions en linguistique. 3° partie. *Arachnides*, 94: 33-37.
- DUPRE G., 2020. Check-list des scorpions du Venezuela. *Arachnides*, 95: 3-27.
- DUPRE G., 2020. Les scorpions en linguistique. 4ème et dernière partie. *Arachnides*, 95: 28-30.
- DUPRE G., 2020. Les scorpions du Sri-Lanka. *Arachnides*, 96: 2-7.
- DUPRE G., 2020. Les scorpions d'Israël et de Palestine. *Arachnides*, 96: 8-11.
- DUPRE G., 2020. Histoire "mouvementée" de la famille des Vaejovidae Thorell, 1876 (Arachnida: Scorpiones). *Arachnides*, 96: 12-17.
- DUPRE G., 2020. Divertissement chiffré. *Arachnides*, 96: 18-19.
- DUPRE G., 2020. Check-list des espèces du genre *ANANTERIS* Thorell, 1891 (Scorpiones: Buthidae). *Arachnides*, 97: 1-12.
- DUPRE G., 2020. Les scorpions d'Asie centrale. *Arachnides*, 97: 13-17.
- DUPRE G., 2020. Une endémicité insulaire record! *Arachnides*, 97: 18-19.
- DUPRE G., 2020. Petite histoire de la paléontologie des scorpions (additif). *Arachnides*, 97:20-21.
- DUPRE G., 2020. Nouvelle synthèse sur la reproduction des scorpions. *Arachnides*, 98: 1-16.
- DUPRE G., 2020. Check-list des scorpions de Grèce. *Arachnides*, 98: 17-25.
- EL-BITAR A.M.H., SARHAN M.M.H., ABDEL-RAHMAN M.A., QUINTERO-HERNANDEZ V., AOKI-UTSUBO C., MOUSTAFA M.A. & POSSANI L.D., 2020 . Smp76, a scorpine-like peptide isolated from the venom of the scorpion *Scorpio maurus palmatus*, with a potent antiviral activity against hepatitis C virus and dengue virus. *International Journal of Peptide Research and Therapeutics*, 26 (2): 811-821.
- ELRAYESS R.A., MOHALLAL M.E., EL-SHAHAT Y.M., EBAID H.M., MILLER K., STRONG P.N. & ABDEL-RAHMAN M.A., 2020. Cytotoxic effects of Smp24 and Smp43 scorpion venom antimicrobial peptides on tumour and non-tumour cell lines. *International Journal of Peptide Research and Therapeutics*, 26: 1409-1415.
- ERDEM K. & ROHAT A., 2020. Epidemiology of scorpion envenomation in the Southeast of Turkey. *Journal of Clinical Medicine of Kazakhstan*, 6 (60): 56-62.
- ESPINAL M.R., LOPEZ L.I. & MORA J.M., 2020. Consumption event of the Pallas's mastiff bat (*Molossus molossus*) by the Central America bark scorpion (*Centruroides exilimanus*) en Honduras. *Therya Notes*, 1 (1): 110-114.
- EVANS E.R.J., McINTYRE L., NORTHFIELD T.D., DALY N.L. & WILSON D.T., 2020. Small molecules in the venom of the scorpion *Hormurus waigiensis*. *Biomedicines*, 8 (8): 259.

- FEOLA A., PERRONE M.A., PISCOPO A., CASELLA F., PIETRA B.D. & DI MIZIO G., 2020. Autopsy findings in case of fatal scorpion sting: A systematic review of the literature. *Healthcare (Basel)*: 8 (3): E325.
- FERNANDES SILVA C.C., SQUAIELLA-BAPTISTAO C.C., KODAMA R.T., DUZZI B., COUTINHO-OLIVEIRA P., GOMES SILVA N.A., CAJADO-CARVALHO D., VIEIRA PORTARO F.C., 2020. Metalloserrulases 3 and 4 from the *Tityus serrulatus* scorpion venom and its inflammatory properties. *Toxicon*, 177 (suppl.1): S61.
- FET V. & KOVARIK F., 2020. New scorpion taxa (Arachnida: Scorpiones) described in the journal "Euscorpius" in 2002-2020. *Euscorpius*, 300: 1-33.
- FIGUEIREDO de LIMA J., 2020. Caracterização Citogenética de *Bothriurus asper* e *Bothriurus rochai*, primeira descrição de configurações multivalentes para o gênero (Scorpiones). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- FIGUEIREDO de LIMA J., SOUSA CARVALHO L. & SCHNEIDER M.C., 2020. The first chromosomal analysis of bisexual populations of the Brazilian scorpion *Tityus serrulatus* (Scorpiones: Buthidae). *The Journal of Arachnology*, 48 (1): 77-83.
- FIROOZIYAN S., SADAGHIANIFAR A., RAFINEJAD J., VATANDOOST H. & BAVANI M.M., 2020. Epidemiological characteristics of scorpionism in West Azerbaijan Province, Northwest of Iran. *Journal of Arthropod-Borne Diseases*, 14 (2): 193-201.
- FOERSTER S.I.A., de ARAUJO LIRA A.F. & de ALMEIDA C.G., 2020. Vegetation structure as the main source of variability in scorpion assemblages at small spatial scales and further considerations for the conservation of Caatinga landscapes. *Neotropical Biology and Conservation*, 15 (4): 533-550.
- FOERSTER S., PEREIRA B., LIRA A. & BALBINO V., 2020. Dispersão e atuação de barreiras ecológicas sobre a diferenciação genética em populações do escorpião *Jaguajir rochae* (Scorpiones: Buthidae). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- FOERSTER S., PEREIRA B., LIRA A. & BALBINO V., 2020. Potenciais determinantes de variabilidade genética em populações do escorpião *Jaguajir rochae* (Scorpiones: Buthidae) em ambientes de Caatinga. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- FRUCHTMAN Y., PERRY Z., ELMAQUAI O., SCHWARTZ D. & LEIBOVITZ E., 2020. Pediatric animal-related injuries in the jewish and arab population in Southern Israel. (in Hebrew). *Harefuah*, 159 (12): 876-881.
- FURTADO A.A., DANIELE-SILVA A., Da SILVA-JUNIOR A.A. & FERNANDES-PEDROSA M. de FREITAS, 2020. Biology, venom composition, and scorpionism induced by the Brazilian scorpion *Tityus stigmurus* (Thorell, 1876) (Scorpiones: Buthidae): A mini-review. *Toxicon*, 185: 36-45.
- GALVEZ D., ANINO Y., VEGA C. & BONILLA E., 2020. Immune priming against bacteria in spiders and scorpions. *Peer Journal*, 8: e9285.
- GAO S., LIANG H., SHOU Z., YAO Y., LV Y., SHANG J., LU W., JIA C., LIU Q., ZHANG H. & XIAO L., 2020. De novo transcriptomic and proteomic analysis and potential toxin screening of *Mesobuthus martensii* samples from four different provinces. *Journal of Ethnopharmacology*, 265: 113268.
- GARCIA F., OVIEDO-DIEGO M., MATTONI C.I., PERETTI A.V. & OJANGUREN-AFFILASTRO A.A., 2020. Adaptaciones lipídicas al frío de dos escorpiones con actividad invernal, *Urophonius achalensis* y *Urophonius brachycentrus* (Bothriuridae). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- GARCIA-GUERRERO I.A., CARCAMO-NORIEGA E., GOMEZ-LAGUNAS F., GONZALEZ-SANTILLAN E., ZAMUDIO F.Z., GURROLA G.B. & POSSANI L.D., 2020. Biochemical characterization of the venom from the Mexican scorpion *Centruroides ornatus*, a dangerous species to humans. *Toxicon*, 173: 27-38.
- GARCIA-HERNANDEZ S., MACHADO G., 2020. "Tail" autotomy and consequent stinger loss decrease predation success in scorpions. *Animal behaviour*, 169: 157-167.

- GARCIA-HERNANDEZ S. & MACHADO G., 2020. Como los escorpiones enfrentan la perdida permanente de su "cola"? VI° Congr. LatinoAmer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- GHONEIM K., HAMADAH Kh., TANANI M. & EMAM D., 2020. Toxicity and delictious impacts of the deathstalker scorpion, *Leiurus quinquestriatus*, venom on development of the greater wax moth, *Galleria mellonella* (Lepidoptera: Pyralidae). *Egyptian Academic Journal of Biological Sciences*, 13 (4): 199-211.
- GIGOLAEV A.M., KUZMENKOV A.I., PEIGNEUR S., TABAKMAKHER V.M., PINHEIRO-JUNIOR E.L., CHUGUNOV A.O., EFREMOV R.G., TYTGAT J. & VASSILEVSKI A.A., 2020. Tuning scorpion toxin selectivity: Switching from  $K_v1.1$  to  $K_v 1.3$ . *Frontiers in Pharmacology*, 11: 1-10.
- GOES COSTA G., MONTEIRO SEREJO L. de F., de SOUZA COELHO J., CANDIDO D.M., da COSTA GADELHA M.A., de OLIVEIRA PARDAL P.P., 2020. First report of scorpionism caused by *Tityus serrulatus*, described by Lutz and Mello, 1922 (Scorpiones, Buthidae), a species non-native to the State of Para, Brazilian Amazon. *Revista da Sociedade Brasileira de Medicina tropical*, 53: 1-3.
- GOMEZ-MENDOZA D.P., LEMOS R.P., JESUS I.C.G., GORSHKOV V., McKINNIE S.M.K., VEDERAS J.C., KJELDSSEN F., GUATIMOSIM S., SDANTOS R.A., PIMENTA A.M.C. & VERANO-BRAGA T., 2020. Moving pieces in a cellular puzzle: A cryptic peptide from the scorpion toxin Ts14 activates AKT and ERK signaling and decreases cardiac myocyte contractility via dephosphorylation of phospholamban. *Journal of Proteome Research*, 19 (8): 3467-3477.
- GOMEZ-RAMIREZ I.V., RIANO-UMBARILA L., OLAMENDI-PORTUGAL T., RESTANO-CASSULINI R., POSSANI L.D. & BECERRIL B., 2020. Biochemical, electrophysiological and immunological characterization of the venom from *Centruroides baergi*, a new scorpion species of medical importance in Mexico. *Toxicon*, 184: 10-18.
- GONÇALVES J.E., de FATIMA RAMOS dos SANTOS MEDEIROS S.M., GOMES MENDES R.C.M., MACHADO BEZERRA I.N., NOBREGA M.M. & LIMA M.W.H., 2020. Accidents caused by venomous animals: an analysis of the epidemiological profile in the Northeast region of Brazil in the period from 2010 to 2019. *Research, Society and development*, 9 (10): 1-16.
- GONÇALVES VELOSO H.M., de ARAUJO LIRA A.F., da SILVA M.B. & da SILVA W.D., 2020. Resultados preliminares do desenvolvimento pós-embrionário de *Jaguajir rochae* (Borelli, 1910) (Arachnida: Scorpiones). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- GONZALEZ-GOMEZ J.C., VALENZUELA-ROJAS J.C., GARCIA L.F., PEREZ L.M.F., GUEVARA G., BUITRAGO S., CUBILLOS A. & Ven der MEIDJEN A., 2020. Sexual dimorphism in the biomechanical and toxicological performance in prey incapacitation of two morphologically distinct scorpion species (*Chactas* sp. and *Centruroides* sp.). *Biological Journal of the Linnean Society*, 129 (1): 190-198.
- GONZALEZ-SANTILLAN E., CID URIBE J., GUTIERREZ M.T.R. & VALDEZ VELASQUEZ L.L., 2020. Avances en la sistematica filogenetica de los alacranes de importancia médica de América en Norte (Buthidae, *Centruroides*). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- GOODMAN A. & ESPOSITO L., 2020. Niche partitioning in congeneric scorpions. *Invertebrate Biology*, 139 (1): e12280.
- GREENFELD I., KELLERSZTEIN I. & WAGNER H.D., 2020. Nested helicoids in biological microstructures. *Nature Communications*, 11: article 224.
- GUIDINI G.M. , da SILVA W.M.C., CAMARGOS T.S., MOURAO C.F.B., GALANTE P., RAIOL T., BRIGIDO M.M., WALTER M.E.M.T. & SCHWARTZ E.N.F., 2020. Venom gland peptides of arthropods from the Brazilian Cerrado biome unveiled by transcriptome analysis. pp48-57. In "Brazilian Symposium on Bioinformatics: Advances in Bioinformatics and computational". Lecture Notes in Computer Sciences, volume 11347.

- GUIMARÃES FRANÇA E.V., BRAZIL T.K., MISE Y.F. & LIRA-da-SILVA R.M., 2020. Notas sobre a reprodução de *Tityus aba* Candido, Lucas, Souza, Diaz e Lira-da-Silva, 2005. (Scorpiones; Buthidae). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- GUNAY B.C., YURTSEVER M. & DURDAGI S., 2020. Elucidation of interaction mechanisms of hERG1 potassium channel with scorpion toxins BeKm-1 and BmTx3b. *Journal of Molecular Graphics and Modelling*, 96: 107504.
- HAGHI F.M., BORNA H., DEGHANI R., FAZELI-DINAN M., YAZDANI-CHERATI J., DHGHAN O., SAHRAEI-ROSTAMI F. & NIKOOKAR S.H., 2020. Faunistic study of scorpions (Arachnida: Scorpiones) in Qaenat County in Iran in 2017. (in Farsi). *Qom University of Medical and Science Journal*, 14 (4): 66-74.
- HAN S., ARMIEN A.G., HILL J.E., FERNADO C., BRADWAY D.S., STRINGER E., NEWTON A.AL. & HUANG Y., 2020. Infection with a novel *Rickettsiella* species in emperor scorpion (*Pandinus imperator*). *Veterinary Pathology*, 57 (6): 858-870.
- HANAFI-BOJD A.A., SHARIFIFARD M., JAHANIFARD E., NAVIDPOUR S. & VAZIRIANZADEH B., 2020. Presence probability of *Hemiscorpius lepturus* Peters, 1861 using maximum entropy approach in the western areas of Zagros Mountains, Iran. *Veterinary World*, 13 (2): 296-303.
- HARTY C.N., DAVID E.M., HECTOR J.B., CORBIT A.G. & NELSEN D.R., 2020. Risk assessment and the effects of habitat complexity on the defensive behaviors of the southern striped scorpion, *Vaejovis carolinianus*. *Toxicon*, 182 (supp.1): S33.
- HASAN H.F., RADWAN R.R. & GALAL S.M., 2020. Bradykinin-potentiating factor isolated from *Leiurus quinquestriatus* scorpion venom alleviates cardiomyopathy in irradiated rats via remodeling of the RAAS pathway. *Clinical and Experimental Pharmacology and Physiology*, 47 (2): 263-273.
- HAUKE J.T. & HERZIG V., 2020. Love bites - Do venomous Arachnids make safe pets? *Preprints*, 18pp.
- HERNANDEZ-BORROTO S. & ALEGRE A., 2020. Primer caso de depredacion de un opilion por un escorpion en Cuba (Opiliones, Scorpiones). *Revista Ibérica de Aracnologia*, 37: 241-243.
- HOROZ Ö.Ö, YILDIZDAŞ D., ASLAN N., GÖKAY S.S., EKINCI F., ERDEM S., HAYTOĞLU Z. SETDEMİR Y. & YILMAZ H.L., 2020. Is there any relationship between initial hematological parameters and severity of scorpion envenomation? *Turkish Journal of Pediatrics*, 62 (3): 394-404.
- HOSSEINZADEH M.S., 2020. Potential distribution and effects of climate change on the risk of scorpion sting with endemic and medically important scorpion *Odontobuthus doriae* Thorell, 1876 (Arachnida: Scorpionidae: Buthidae) in Iran. *Zoology and Ecology*, 30 (1): 109-115.
- HOUSLEY D.M., PINYON J.L., VON JONQUIERES G., PERERA C.J., SMOUT M., LIDDELL M.J., JENNINGS E.A., WILSON D. & HOUSLEY G.D., 2020. Australian scorpion *Hormurus waigiensis* venom fractions show broad bioactivity through modulation of bio-impedance and cytosolic calcium. *Biomolecules*, 10 (4): 617.
- HOWARD R.J., PUTTICK M.N., EDGEcombe G.D. & LOZANO-FERNANDEZ J., 2020. Arachnid monophyly: Morphological, palaeontological and molecular support for a single terrestrialization within Chelicerata. *Arthropod Structure & Development*, 59: 100997.
- HUSSEN F.S. & AHMED S.T., 2020. New data of scorpion fauna, include two new records with identification key of scorpion species (Arachnida: Scorpiones) in Iraq. *Plant Archives*, 20 (2): 6711-6725.
- JAFARI H., SALABI F. & FOROUZAN A., 2020. A study of genetic diversity among different population of *Orthochirus* sp. based on cytochrome C oxidase subunit I and 16srRNA sequencing. *Turkish Journal of Zoology*, 44: 64-68.
- JAFARI H., SALABI F., NAVIDPOUR Sh. & FORIUZAN A., 2020. Phylogenetic and morphological analyses of *Androctonus crassicauda* from Khuzestan province (Scorpiones: Buthidae). *Archives of Razi Institute*, 75 (3): 405-412.

- JARED C., ALEXANDRE C., MAILHO-FONTA2NA P.L., PIMENTA D.C., BRODIE Jr. E.D. & ANTONIAZZI M.M., 2020. Toads prey upon scorpions and are resistant to their venom: A biological and ecological approach to scorpionism. *Toxicon*, 178: 4-7.
- JOCHIM E.E., BOUSSARD L.L.M. & HENDRIXSON B.E. Integrative species delimitation and taxonomic status of the scorpion genus *Vaejovis* Koch, 1836 (Vaejovida) in the Santa Catalina Mountains, Arizona. *Euscorpius*, 316: 1-11.
- KADU S. & SHIRSATH U., 2020. To evaluate the epidemiological factors affecting the severity of scorpion envenomation in pediatric age group. *Indian Journal of Forensic Medicine and Pathology*, 13 (1): 89-93.
- KALANTRI P., SINGLA R., JAIN A. & BANSAL N.O., 2020. A rare case of scorpion sting-induced myocarditis with left atrial appendage clot leading to thromboembolic complications. *Heart and Mind*, 4 (2): 53-56.
- KAMPO S., CUI Y., ZHOU T., DOUDOU N.R., KWAKYE A.K., AHMMED B., YU J., RICHARD S.A., YAN Q. & WEN Q.P., 2020. Intrathecal injection of scorpion venom peptide, BmK AGAP inhibits KCNQ2/3, TRPV1 and decreases TNF- $\alpha$  and IL-1 $\beta$  expression to attenuates pain in rat. *SSRN Electronic Journal*, 1-40.
- KARAMAN I., 2020. A new *Euscorpius* species (Scorpiones: Euscorpiidae) from a Dinaric cave - the first record of troglobite scorpion in European fauna. *Biologia Serbica*, 42: 1-18.
- KASHEVEROV I.E., OPARIN P.B., VASSILEVSKI A.A., IVANOV I.A., TSETLIN V.I. & UTKIN Y.N., 2020. Channel blockers from scorpion venoms inhibit nicotinic acetylcholine receptors. *Toxicon*, 177 (suppl.1): S11.
- KAWAI K., 2020. Distribution area of dwarf wood scorpion *Liocheles australasiae* (Fabricius, 1775) in Japan: First records from Irabu-jima island, Shimoji-shima island (Miyakojima City) and Yonaguni-jima island. (in Japanese). *Fauna Ryukyana*, 54: 7-9.
- KAWAI K., 2020. Records of *Liocheles australasiae* (fabricius, 1775) (Hormuridae) and *Isometrus maculatus* (De Geer, 1778) (Arachnida: Scorpiones) from Hateruma-jima island. (in Japanese). *Fauna Ryukyana*, 56: 9.11.
- KAYHAN N.Y. & ÔCAL I.C., 2020. Functional morphology and histology of pectine (sensory comb) organ of *Protoirus kraepelini* (Iuridae: Scorpiones). (in Turkish). *Turkish Journal of Agriculture-Food Science and Technology*, 8 (1): 99-104.
- KHAMEHCHIAN S., HOSSEINKHANI S. & NIKKHAH M., 2020. Effect of peptide derived from scorpion toxin on enhanced permeability of doxorubicin conjugated gold nanoparticles in Hela and MDA-MB-231 cells. *Alborz University Medical Journal*, 9 (4): 367-379.
- KHAN A., AL-KATHIRI W.H., BALKHI B., SAMRKANDI O., AL-KHALIFA M.S. & ASIRI Y., 2020. The burden of bites and stings management: experience of an academic hospital in the Kingdom of Saudi Arabia. *Saudi Pharmaceutical Journal*, 28 (8): 1049-1054.
- KHEMILI D., LARABA-DJEBARI F. & HAMMOUDI-TRIKI D., 2020. Involvement of toll-like receptor 4 in neutrophil-mediated inflammation, oxidative stress and tissue damage induced by scorpion venom. *Inflammation*, 43 (1): 155-167.
- KOÇ H., AVSAR C. & BAYRAKCI Y., 2020. Antimicrobial activity of hemolymph and venom obtained from some scorpion species. *Hacettepe Journal of Biology and Chemistry*, 48 (4): 349-354.
- KOFFINAS L., WARD M.J., ELLSWORTH S.E., NYSTROM G.S., MARTINEZ P., SAUL R.M. & ROKYTA D.R.R., 2020. Exploring venom variation and population dynamics in the striped bark scorpion (*Centruroides vittatus*). *Toxicon*, 182 (suppl.1): S32.
- KORDZANGENE A., MOHEBAT R., MOSSLEMEN M.H. & MOGHADAM A.T., 2020. reduction of purification time of polyspecific equine F(ab')<sub>2</sub> antivenom against scorpion envenomation. *International Journal of Medical Laboratory*, 7 (1): 49-58.
- KOVARIK F., 2020. Nine new species of *Scorpiops* Peters, 1861 (Scorpiones: Scorpiopidae) from China, India, Nepal, and Pakistan. *Euscorpius*, 302: 1-43.

- KOVARIK F., FET V. & SIYAM M., 2020. Taxonomic position of *Orthochirus olivaceus* (Karsch, 1881), the type species of the genus *Orthochirus* Karsch, 1892 (Scorpiones: Buthidae). *Euscorpius*, 319: 1-15.
- KOVARIK F., FET V. & YAGMUR E.A., 2020. Further review of *Orthochirus* Karsch, 1892 (Scorpiones: Buthidae) from Asia: taxonomic position of *O. melanurus*, *O. persa*, *O. scrobiculosus*, and description of six new species. *Euscorpius*, 318: 1-73.
- KOVARIK F. & LOWE G., 2020. Scorpions of the Horn of Africa (Arachnida: Scorpiones). Part XXIV. *Leiurus* (Buthidae), with description of *Leiurus gubanensis* sp.n. *Euscorpius*, 309: 1-19.
- KOVARIK F., LOWE G., BYRONOVA M. & ST' AHLAVSKY F., 2020. *Euscorpius thracicus* sp.n. (Scorpiones: Euscorpiidae) from Bulgaria. *Euscorpius*, 326: 1-17.
- KOVARIK F., LOWE G. & ELM I H.Sh.A., 2020. Scorpions of the Horn of Africa (Arachnida: Scorpiones). Part XXV. Description of *Pandinurus awalei* sp.n. and the male of *Pandiborellius somalilandus* (Kovarik, 2012), with remarks on recent synonymies (Scorpionidae: Pandininae). *Euscorpius*, 322: 1-21.
- KOVARIK F., LOWE G. & ST' AHLAVSKY F., 2020. *Reddyanus justii* sp.n. from Laos (Scorpiones: Buthidae). *Euscorpius*, 321: 1-11.
- KOVARIK F., LOWE G., STOCKMANN M. & ST' AHLAVSKY F., 2020. Notes on *Compsobuthus*: redescription of *C. arabicus* Levy et al., 1973 from Arabia, and description of two new species from North Africa (Scorpiones: Buthidae). *Euscorpius*, 298: 1-39.
- KOVARIK F., LOWE G., STOCKMANN M. & ST' AHLAVSKY F., 2020. Two new *Chaerilus* from Thailand and Laos (Scorpiones: Chaerilidae). *Euscorpius*, 324: 1-20.
- KOVARIK F., LOWE G., STOCKMANN M. & ST' AHLAVSKY F., 2020. Revision of genus-group taxa in the family Scorpipidae Kraepelin, 1905, with description of 15 new species (Arachnida, Scorpiones). *Euscorpius*, 325: 1-140.
- KOVARIK F. & NAVIDPOUR S., 2020. Six new species of *Orthochirus* Karsch, 1892 from Iran (Scorpiones: Buthidae). *Euscorpius*, 312: 1-40.
- KOVARIK F. & ST' AHLAVSKY F., 2020. Five new species of *Euscorpius* Thorell, 1876 (Scorpiones: Euscorpiidae) from Albania, Greece, North Macedonia, and Serbia. *Euscorpius*, 315: 1-37.
- KOVARIK F., ST' AHLAVSKY F. & ELM I H.Sh.A., 2020. Scorpions of the Horn of Africa (Arachnida: Scorpiones). Part XXIII. *Buthus* (Buthidae), with description of two new species. *Euscorpius*, 307: 1-32.
- KRAYEM N. & GARGOURI Y., 2020. Scorpion venom phospholipases A2: A minireview. *Toxicon*, 184: 48-54.
- LAGARTO A., BUENO V., PEREZ M.R., RODRIGUEZ C.C., GUEVARA I., VALDES O., BELLMA A., GABILONDO T. & PADRON A.S., 2020. Safety evaluation of the venom from scorpion *Rhopalurus junceus* : Assessment of oral short term, subchronic toxicity and teratogenic effect. *Toxicon*, 176: 59-66.
- LANG A., SEWELL E., MARTIN M., KUHLMAN R., PERGERSON R., CORBIT A.G. & NELSEN D.R., 2020. Preliminary investigation of survivorship and the emergence of sexual dimorphism and defensive behaviors in the early ontogenesis of *Vaejovis carolinianus*. *Toxicon*, 182 (supp.1): S33.
- LEE C., PARK B., TSAI J., CARTER D., NELSEN D. & CORBIT A., 2020. Out of sight out of mind: The role of vision in risk assessment and venom metering in *Vaejovis carolinianus*. *Toxicon*, 182 (supp.1): S33-S34.
- LEI X., ZHOU W., WAN M., WEI H. & WANG B., 2020. A new scorpion from a Permian peat swamp in Inner Mongolia, China. *Proceedings of the Geologists' Association*, 131 (2): 160-167.
- LI S., SUNCHEN S., HE D., QIN C., ZUO Z., SHEN B., CAO Z., HONG W. & MIAO L., 2020. ImKTx96, a peptide blocker of the Kv1.2 ion channel from the venom of the scorpion *Isometrus maculatus*. *Peptides*, 123: 170172.

- LI Z., YUAN Y., LI S., DENG B. & WANG Y., 2020. Antibacterial activity of a scorpion-derived peptide and its derivatives *in vitro* and *in vivo*. *Toxicon*, 186: 35-41.
- LIMA C.A., LEAL A.L.R., MANGUEIRA S.A.L., COSTA S.M. & SANTOS D.F., 2020. Surveillance in health: accidents and deaths caused by venomous animals in the southeast region - Brazil, 2005-2015. *Revista de Pesquisa: Cuidado é Fundamental Online*, 12: 20-28.
- LIMA-BATISTA E.M., GOMEZ-MENDOZA D.P., MOYSES M.N., De SOUSA GOMES K., De LIMA M.E., SOUZA-FAGUNDES E., Da SILVA A.M., KJELDSSEN F., VERANO-BRAGA T. & PIMENTA A.M.C., 2020. Proteomic and phosphoproteomic analyses in h160 cells treated with the scorpion-derived peptide lunatin-1. *Toxicon*, 177 (suppl.1): S39.
- LINS A., CARVALHO L., MOURA G. & LIRA A., 2020. Estimativa do número de ínstares do escorpião *Jaguajir agamemnon* (Koch, 1839). VIº Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- LOPEZ-CABRERA D., RAMOS-ORTIZ G., GONZALEZ-SANTILLAN E. & ESPINOSA-LUNA R., 2020. Characterization of the fluorescence intensity and color tonality in the exoskeleton of scorpions. *Journal of Photochemistry and Photobiology B: Biology*, 209: 111945.
- LOPEZ-GIRALDO A.E., OLAMENDI-PORTUGAL T., RIANO-UMBARILA L., BECERRIL B., POSSANI L.D., DELEPIERRE M. & DEL RIO-PORTILLA F., 2020. The three-dimensional structure of the toxic peptide C113 from scorpion *Centruroides limpidus*. *Toxicon*, 184: 158-166.
- LORIA S.F. & PRENDINI L., 2020. Out of India: diversification of asian forest scorpions reveals three colonizations of Southeast Asia. *Scientific Reports*, 10: 22301, 19pp.
- LOURENÇO W.R., 2020. A possible relict population of *Mesobuthus (Aegaeobuthus?) nigrocinctus* (Ehrenberg, 1828) in the Bishri Mountains of Syria (Scorpiones: Buthidae). *Serket*, 17 (2): 77-86.
- LOURENÇO W.R., 2020. A propos de la localité d'origine d'*Ananteris balzani* Thorell, 1891, espèce type du genre *Ananteris* Thorell, 1891 (Scorpiones: Buthidae). *Revista Ibérica de Aracnología*, 36: 185-187.
- LOURENÇO W.R., 2020. The coevolution between telson morphology and venom glands in scorpions (Arachnida). *Journal of Venomous Animals and Toxins, including Tropical Diseases*, 26: 1-8.
- LOURENÇO W.R., 2020. A new species of *Lychas* C.L. Koch, 1845 from Ko Tao Island, Thailand (Scorpiones: Buthidae). *Revista Ibérica de Aracnología*, 36: 59-64.
- LOURENÇO W.R., 2020. First record and description of a new species of *Leiurus* Ehrenberg from Kuwait (Scorpiones: Buthidae). *Serket*, 17 (2): 143-149.
- LOURENÇO W.R., 2020. Why does the number of dangerous species of scorpions increase? The particular case of the genus *Leiurus* Ehrenberg (Buthidae) in Africa. *Journal of Venomous Animals and Toxins, including tropical Diseases*, 26: 1-9.
- LOURENÇO W.R., 2020. A remarkable new species of *Leiurus* Ehrenberg, 1828 from the North Deserts of Mali (Scorpiones: Buthidae). *Revista Ibérica de Aracnologia*, 37: 147-152.
- LOURENÇO W.R., 2020. Nouvelles considérations taxonomiques sur le genre *Iomachus* Pocock, 1893 (Scorpiones: Hormuridae), et en particulier sur les espèces africaines. *Revista Ibérica de Aracnologia*, 37: 205-211.
- LOURENÇO W.R., CHEVALIER J., GANGADIN A. & YTHIER E., 2020. Description of a new species of *Ananteris* Thorell, 1891, from Suriname (Scorpiones, Buthidae). *Bulletin de la Société entomologique de France*, 125 (3): 233-239.
- LOURENÇO W.R., EL BOUHISSI M. & SADINE S.E., 2020. Further considerations on the *Buthus* Leach, 1815 species present in Algeria with description of a new species (Scorpiones: Buthidae). *Revista Ibérica de Aracnologia*, 36: 103-108.
- LOURENÇO W.R. & MOTTA P.C., 2020. Presence of *Isometrus maculatus* (DeGeer) (Scorpiones, Buthidae) in the central savannas of Brazil. *Revista Ibérica de Aracnologia*, 36: 15-160.



- LOURENÇO W.R., TRAN T.H. & PHAM D.S., 2020. The genus *Chaerilus* Simon, 1877, in Vietnam with the description of a new species found in a volcanic cave (Scorpiones, Chaerilidae). *Bulletin de la Société entomologique de France*, 125 (1): 19-28.
- LOURENÇO W.R., ROSSI A., WILME L., RAHERILALAO M.J., SOARIMALALA V. & WAEBER P.O., 2020. The remarkable diversity of the genus *Grosphus* Simon, 1880 (Scorpiones: Buthidae) in Southern Madagascar and in particular in the region of Cap Sainte Marie. *Arachnida - Rivista Aracnologica Italiana*, 27: 2-35.
- LOURENÇO W.R., WAEBER P.O. & WILME L., 2020. New taxonomic considerations on the genus *Tityobuthus* Pocock, 1890, and description of a new species (Scorpiones, Buthidae). *Bulletin de la Société entomologique de France*, 125 (4): 371-381.
- LOUZA G.S., GARCEZ do CARMO L.L. & CONEÍÇAO I.M., 2020. Effect of *Tityus serrulatus* scorpion venom on isolated jejunum: A very useful tool to study the interaction between neurons in the enteric nervous system. *Autonomic Neuroscience*, 227: 102676.
- LUNA-RAMIREZ K.S., CSOTI A., Mac ARTHUR J.R., CHIN Y.K.Y., ANANGI R., NAJERA R. del C., POSSANI L.D., KING G.F., PANYI G., YU H., ADAMS D.J. & FINOL-URDANETA R.K., 2020. Structural basis of the potency and selectivity of urotoxin, a potent Kv1 blocker from scorpion venom. *Biochemical Pharmacology*, 174: 113782.
- Mac REYNOLDS C.N., 2020. Effect of seasons and scorpion size on the foraging and diet of the striped bark scorpion, *Centruroides vittatus* (Buthidae: Scorpiones) in blackbrush habitat of south Texas. *Euscorpius*, 323: 1-16.
- MAGALHAES GONÇALVES I., da SILVA VIEIRA I. & PEREIRA MODESTO G.G., 2020. Perfil epidemiológico dos acideentes escorpiônicos no estado do Tocantins no período de 2007 a 2017. *Brazilian Journal of Development*, 6 (12): 97211-97221.
- MAIA A., XAVIER C. & CARVALHO L.S., 2020. Primeiro registro de *Tityus stigmurus* (Thorell, 1877) e *Jaguajir rochae* (Borelli, 1910) (Scorpiones: Buthidae) para Belém, Pará, Brasil. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- MAJUMDAR A., ATAM V., ALI ANSARI S., KUMAR S. & BHARDWAJ A., 2020. Basal ganglia hemorrhage secondary to scorpion sting: a fatal presentation. *The Egyptian Journal of Neurology, Psychiatry and Neurosurgery*, 56: 65.
- MALEKI M. & DOUNIGHI N.M., 2020. Purification and characterization of a novel type of neurotoxic peptides from the venom of the Iranian scorpion *Hemiscorpius lepturus*. *Iranian Journal of Basic Medical Sciences*, 23 (2): 195-201.
- MARCY S., SARFO-POKU C., FOX G.A., COOPER A.M., MARTSON L., KELLN W., HUNG K.Y. & HAYES W.K., 2020. A sting to die for: Venom composition and complexity in Southwestern North American scorpions. *Toxicon*, 182 (supp.1): S32.
- MARSTON L.A., NISANI Z., FOX G.A., TRUJILLO D., MARCY S., HUNG K.Y. & HAYES W.K., 2020. A sting operation: Risk assessment and venom expenditure by scorpions in defensive contexts. *Toxicon*, 182 (supp.1): S9.
- MARTINE A.M., RICARDI-BRANCO F. BELOTO B. & JURIGAN I., 2020. *Suraju itayma*: The first paleozoic fossil scorpion in South America. *Journal of South American Earth Sciences*, 101: 1-8.
- MARTINEZ GARCIA S., 2020. La Reproducción de *Centruroides suffusus* desde su anatomía interna. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- MARTINS J. & LIRA A., 2020. Atualização da fauna de escorpiões da região Amazônica brasileira. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- MAYORGA-FLORES M., CHANTÔ A., MELCHOR-MENESES C.M., DOMINGO I., TITAU-DELGADO G.A., GALINDO-MURILLO R., VANDIER C. & del RIO-PORTILLA F., 2020. Novel blocker of onco SK3 channels derived from scorpion toxin tamapin and active against migration of cancer cells. *ACS Medicinal Chemistry Letters*, 11 (8): 1627-1633.

- MEENA K.R., BANSAL A. & DAGAL K.C., 2020. A study on the clinical profile and outcome of children with scorpion sting in tertiary care Hospital Jhalawar, Rajasthan. *International Journal of Medical and Biomedical Studies*, 45 (5): 39-40.
- MENG L., ZHAO Y., QU D., XIE Z., GUO X., ZHU Z., CHEN Z., ZHANG L., LI W., CAO Z., TIAN C. & WU Y., 2020. Ion channel modulation by scorpion hemolymph and its defensin ingredients highlights origin of neurotoxins in telson formed on paleozoic scorpions. *International Journal of Biological Macromolecules*, 148: 351-363.
- MIKAELIAN A.G., TARBOULAY E., ZHANG X.M., YERITSYAN E., PEDERSEN P.L., KO Y.H. & MATALKA K.Z., 2020. Pleiotropic anticancer properties of scorpion venom peptides: *Rhopalurus princeps* venom as an anticancer agent. *Drug Design, Development and Therapy*, 14: 881-893.
- MIRANDA R.J., BERMUDEZ S., FLOREZ D. E. & De ARMAS L.F., 2020. A new species of *Tityus* from Panama and Costa Rica previously identified as *Tityus pachyurus* Pocock, 1897 (Scorpiones: Buthiade). *Revista Ibérica de Aracnologia*, 37: 197-204.
- MIRANDA R.J., CAMINO N.B., MURGAS I.L. & GONZALEZ S.E., 2020. Escorpiones parasitados con nemátodos en El Cacao, Capira, provincia de Panamá Oeste, República de Panamá. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- MIRANDA R.J. & De ARMAS L.F., 2020. A new species of *Ananteris* (Scorpiones: Buthidae), from Panama. *Euscorpius*, 297: 1-7.
- MIRZA Z.A., 2020. Two new species of buthid scorpion of the genus *Janalychas* Kovarik, 2019 (Arachnida: Scorpiones: Buthidae) from the Western Ghats, India. *Arachnology*, 18 (4): 316-324.
- MOEZ A.S., SAJEDI R.H., BAGHERI K.P., SABATIER J.M. & SHAHBAZZADEH D., 2020. Novel mutant phospholipase D from *Hemiscorpius lepturus* acts as a highly immunogen in BALB/c mice against the lethality of scorpion venom. *Molecules*, 25 (7): 1673.
- MOREIRA M., ARAUJO V., MOURA G. & LIRA A., 2020. Relação entre tamanho corporal e heterogeneidade do habitat na predação intraguildda em escorpiões. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- MOREIRA M., MOURA G. & LIRA A., 2020. Avaliação da taxa de aceitação por fêmeas à investidas reprodutivas dos machos de *Tityus pusillus* Pocock, 1893. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- MORERA CORDOVA V., CORZO BURGUETE G. & FLORES NARANJO E.M., 2020. Determination of the biological activities of the components present in the venom from the endemic Ecuadorian scorpion *Teuthraustes* aff. *atramentarius*. repositorio Yachay Tech/Pregrado/Escuela de ciencias Químicas e Ingeniería/Química.
- MORENO-GONZALEZ J.A., 2020. Systematic revision and phylogenetic analysis of *Tityus* (*Archaeotityus*) (Scorpiones: Buthidae) based upon morphological and molecular characters. Ph.D. thesis, Univ. Sao Paulo.
- MORENO-GONZALEZ J.A. & PINTO-DA-ROCHA R., 2020. Descifrando las relaciones filogenéticas de escorpiones bûtidos en Sudàmerica: evidencia fenotípica y genotípica soporta la reclasificación del caótico género *Tityus*. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- MOSQUEDA-GUEVARA I., ALAVAREZ-JARA M., CHARRE-MEDELLIN J.E. & COLLIMULL J.G., 2020. Aracnofauna en dos tipos de vegetación de la Reserva de la Biosfera Sierra Gorda de Guanajuato. *Entomologia Mexicana*, 7: 1-9.
- MOUKIT M. & KOUACH J., 2020. An unusual site of scorpion bite. *Breast Journal*, 26 (9): 1852.
- MOURÃO C.B.F., BRAND G.D., FERNANDES J.P.C., PRATES M.V., BLOCH Jr C., BARBOSA J.A.R.G., FREITAS S.M., RESTANO-CASSULINI R., POSSANI L.D. & SCHWARTZ E.F., 2020. Head-to-tail cyclization after interaction with trypsin: A scorpion venom peptide that resembles plant cyclotides. *Journal of Medicinal Chemistry*, 63 (17): 9500-9511.
- MURAYAMA G.P., PAGOTI G.F., GUADANUCCI J.P.L. & WILLEMART R.H., 2020. Voracidade, reação à picada e sobrevivência de galinhas domésticas ao se alimentarem de

- escorpiões amarelos (*Tityus serrulatus*). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- MIYASHITA M., MITANI N., KITANAKA A., YAKIO M., CHEN M., NISHIMOTO S., HOTTA H., NAKAGAWA Y. & MIYAGAWA H., 2020. Identification of antimicrobial components from the venom of the scorpion *Liocheles australasiae* using an integrated mass spectrometric and transcriptomic approach. *Toxicon*, 177 (suppl.1): S45-S46.
- MORADI M., YAGMUR E.A., SOLTANABADI M. & SARPIRI S.M., 2020. The scorpion fauna (Arachnida: Scorpiones) of the Southern regions of Sistan and Baluchestan Province with notes on the occurrence of *Androctonus baluchicus* (Pocock, 1900) in Iran. *Biharean Biologist*, 14 (2): 90-97.
- MURGAS I., BERMUDEZ S. & MIRANDA R., 2020. Primer reporte de envenenamiento accidental por *Ananteris platnicki* Lourenço, 1993 (Scorpiones: Buthidae) en Panama. *Revista Médica de Panama*, 40 (3): 163-164.
- MYERS B. & AYREY R.F., 2020. *Vaejovis lapidicola* Stahnke, 1940: hemispermatochore and mating plug from a topotype male (Scorpiones: Vaejovidae). *Euscorpius*, 299: 1-9.
- NAFIE M.S., ABDEL DAIM M.M., ALI I.A.I., NABIL Z.I., TANTAWY M.A. & ABDEL-RAHMAN M.A., 2020. Antitumor efficacy of the Egyptian scorpion venom *Androctonus australis* : in vitro and in vivo study. *The Journal of Basic and Applied Zoology*, 81 (8): 1-10.
- NAJAFIAN M., GHORBANI A., ZARGAR M., BARADARAN M. & BARADARAN N., 2020. Scorpion stings in pregnancy: An analysis of outcomes in 66 envenomed pregnant patients in Iran. *Journal of Venomous Animals and Toxins including Tropical Diseases*, 26: 1-8.
- NAUMOVA M., 2020. Descriptions of two new spiders species, with new data on the Albanian arachnofauna (Arachnida: Araneae, Opiliones, Pseudoscorpiones and Scorpiones). *Acta Zoologica Bulgarica*, 72 (1): 3-12.
- NAVIDPOUR S., 2020. Scorpion fauna of Qazvin Province, Iran (Arachnida: Scorpiones). *International Journal of Research Studies in Zoology*, 6 (1): 12-19.
- NELSEN D., HARTY C.N., DAVID E.M., HECTOR J.B. & CORBIT A.G., 2020. Risk assessment and the effects of refuge availability on the defensive behavior of the Southern unstriped scorpion (*Vaejovis carolinianus*). *Toxins (Basel)*, 12 (9): E534.
- NEVES H., LIRA A. & NORIEGA J., 2020. Efeito da vegetação sobre a densidade de *Hadruroides* cf. *chinchaysuyu* em Manabi, Equador. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- NEZAMIHA F.K., IMANI S., SHAHBAZZADEH D., TIRGARI S. & MIANROODI R.A., 2020. Cloning and expression of OdTx12, a beta excitatory toxin from *Odontobuthus doriae*, *Escherichia coli* and evaluation of its bioactivity in *Locusta migratoria*. *Toxicon*, 183: 20-28.
- NIERMANN C.N., TATE T.G., SUTO A.L., BARAJAS R., WHITE H.A., GUSWILER O.D., SECOR S.M., ROWE A.H. & ROWE M.P., 2020. Defensive venoms: is pain sufficient for predator deterrence? *Toxins*, 12 (4): 260.
- NOAH K.E., HAO J., LI L., SUN X., FOLEY B., YANG Q. & XIA X., 2020. Major revision in Arthropod phylogeny through improved supermatrix, with support for two possible waves of land invasion by Chelicerates. *Evolutionary Informatics*, 16: 1-12.
- NOLAN E.D., SANTIBANEZ-LOPEZ C.E. & SHARMA P.P., 2020. Developmental gene expression as a phylogenetic data class: Support for the monophyly of Arachnospulmonata. *Development Genes and Evolution*, 230: 137-153.
- NUNES-da-FONSECA R., 2020. An overview of early embryonic development of chelicerates. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- NYSTROM G., ELLSWORTH S., WARD M. & ROKYTA D., 2020. Antimicrobial peptide diversity in the giant desert hairy scorpion (*Hadrurus arizonensis*). *Toxicon*, 182 (suppl.1): S9-S10.
- OJANGUREN-AFFILASTRO A.A., RAMIREZ M.J. & PIZARRO-ARAYA J., 2020. Phylogenetic analysis of the winter and southernmost scorpion genus *Urophonius* Pocock, 1893 (Bothriuridae), with description of two new Patagonian species. *Zoologischer Anzeiger*, 289: 50-66.

- OLIVEIRA de ALMEIDA T.S., BRELAZ de CASTRO M.C.A., FOOK S.M.L., CAMELO E.L.S., GOMES L.C.F., MONTEIRO de FIGUEIREDO T.P.R. & PEREIRA V.R.A., 2020. Relação entre o espaço geográfico e a incidência de acidentes escorpiônico no contexto da vulnerabilidade social. *Revista Eletrônica Acervo Saude*, 12 (12): 1-12.
- OLIVERO P.A., OVIEDO-DIEGO M.A., VRECH D.E., MATTONI C.I. & PERETTI A.V., 2020. Sensibilidad de rasgos somáticos y genitales a diferentes presiones selectivas y estrés ambiental: un experimento de 20 años en escorpiones. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- OTAVIO A., LIRA A., SILVA H. & PONTES W., 2020. Efeito da frequência alimentar sobre o *fitness* reprodutivo em fêmeas de *Tityus pusillus* Pocock, 1893. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- OUCI H., EL BOUHISSI M., SADINE S.E. & ABIDI H., 2020. Preliminary study and ecological comments on scorpion diversity in Sidi Bel Abbes region, North-west Algeria. *Serket*, 17 (2): 87-96.
- OVIEDO-DIEGO M., MATTONI C., OLIVERO P.A. & PERETTI A.V., 2020. Escorpiones quisquillosos: aceptación para cortejar y modulación del comportamiento sexual según calidad de la pareja. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- OVIEDO-DIEGO M., MATTONI C., VRECH D.E., MICHALIK P. & PERETTI A.V., 2020. The morphology of mating plugs and its formation in scorpions: Implications for intersexual participation. *Journal of Morphology*, 281 (6): 620-635.
- PARADA-GARZA J.D., MIRANDA-GARCIA L.A., LOPEZ-VALENCIA G., FIGUEROA-SANCHEZ M. & RUIZ-SANDOVAL J.L., 2020. Acute disseminated encephalomyelitis with Balo-like lesion by scorpion sting: Case report. *Neurology India*, 68 (4): 913-915.
- PARK B.G., PEIGNEUR S., ESAKI N., YAMAGUCHI Y., RYU J.H., TYTGAT J., KIM J.L. & SATO K., 2020. Solution structure and functional analysis of helaTx1: the first toxin member of the kappa-KTx5 subfamily. *BMB reports*, 53 (5): 260-265.
- PARK J., OH J.H., KANG H.K., CHOI M.C., SEO C.H. & PARK Y., 2020. Scorpion-venom-derived antimicrobial peptide Css54 exerts potent antimicrobial activity by disrupting bacterial membrane of zoonotic bacteria. *Antibiotocs (Basel)*, 9 (11): E831.
- PARREIRA J.N. & IGLESIAS M.S., 2020. Aspectos del ciclo de vida de *Tityus trivittatus* (Scorpiones; Buthidae). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- PATEL A. & ELSTON D.M., 2020. What's eating you? Bark scorpions (*Centruroides exilicauda* and *Centruroides sculpturatus*). *Cutis*, 105 (5): 239-240.
- PAZ G.G., PIRES DE OLIVEIRA M., Dos SANTOS MIRANDA F., ALVES L.V., ERRANTE P.R., GUZELLA DE CARVALHO R. & MENEZES-RODRIGUES F.S., 2020. Efeitos tóxicos causados por envenenamiento escorpiônico no Brasil. *Revista UNILUS Ensoni e Pesquisa*, 17 (46): 92-99.
- PEYMAN A., GHOLAM B., SABER A. & ALI M.G., 2020. A review of medicinal plants used for snakebites and scorpion stings in Iran. *Research Journal of Pharmacy and Technology*, 13 (3): 1565-1569.
- PIMENTEL A. & CLAINÉ J., 2020. Escorpiões e escorpionismo: Análise de conteúdos e imagens em livros didáticos de biologia do ensino médio. *International Journal Education and Teaching*, 3 (3): 117-136.
- PONCE-SAAVEDRA J. & QUIJANO-RAVELL A., 2020. La familia Diplocentridae (Arachnida: Scorpiones) del estado de Michoacán, México. *Entomologia Mexicana*, 7: 47-53.
- PORDEUS L.M., DIONISIO-da-SILVA W., LIRA A.F.A. & ALBUQUERQUE C.M.R., 2020. Excreta grooming behavior in a litter-dwelling scorpion species (Scorpiones: Buthidae) from Brazil. *The Journal of Arachnology*, 48 (1): 98-99.
- PRADEEP Y.K.L., BHOGARAJU V.K., PATHANIA M., RATHAUR V.K. & KANT R., 2020. Uncommon presentation of scorpion sting at teaching hospital. *Journal of family Medicine and Primary Care*, 9 (5): 2532-2535.

- PRASAD R., KUMAR A., JAIN D., DAS B.K., SINGH U.K. & SINGH T.B., 2020. Echocardiography versus cardiac biomarkers for myocardial dysfunction in children with scorpion envenomation: An observational study from tertiary care center in northern India. *Indian Heart Journal*, 72 (5): 431-434.
- PRENDINI L. & LORIA S.F., 2020. Systematic revision of the Asian forest scorpions (Heterometrinae Simon, 1879), revised suprageneric classification of Scorpionidae Latreille, 1802, and revalidation of Rugodentidae Bastawade et al., 2005. *Bulletin of the American Museum of Natural History*, 442 (1): 1-480.
- PREVOST E.D. & STEMME T., 2020. Non-visual homing and the current status of navigation in scorpions. *Animal Cognition*, 23: 1215-1234.
- QUISPE TORREZ P.P., BERTOLOZZI M.R. & de SIQUEIRA FRANÇA F.O., 2020. Vulnerabilities and clinical manifestations in scorpion envenomations in Santarém, Pará, Brazil: a qualitative study. *Revista da Escola de Enfermagem da U.S.P.*, 54: e03579.
- RADIS-BAPTISTA G. & KONNO K., 2020. Arthropod venom components and their potential usage. *Toxins*, 12, 82: 1-4.
- RAFINEJAD J., SHAHI M., NAVIDPOUR S., JAHANIFARD E. & HANAFI-BOJD A.A., 2020. Effect of climate on spatial distribution of scorpions of significant public health importance in Iran. *Asian Pacific Journal of Tropical Medicine*, 13 (11): 503-514.
- RAMIREZ M.P., SMOLINSKE S.C., WARRICK B.J. & SEIFERT S.A., 2020. Snake, spider, scorpion, insect, and marine exposures and envenomations in pregnancy in the national poison data system, 2009-2018. *Toxicon*, 182 (supp.1): S19.
- RAMIREZ-CRUZ M.P., SMOLINSKE S.C., WARRICK B.J., RAYBURN W.F. & SEIFERT S.A., 2020. Envenomations during pregnancy reported to the national poison data system, 2009-2018. *Toxicon*, 186: 78-82.
- RATHOD S.G., 2020. uncommon presentation of scorpion sting at teaching hospital. *Journal of Family Medicine and Primary Care*, 8 (8): 4480.
- REBBOUH F., MARTIN-EAUCLAIRE M.F. & LARABA-DJEBARI F., 2020. Chitosan nanoparticles as a delivery platform for neurotoxin II from *Androctonus australis hector* scorpion venom: Assessment of toxicity and immunogenicity. *Acta Tropica*, 205: 105353.
- REGAN P.A., FOULKE G.T. & USEDOM E.J., 2020. Arachnida: Spiders and scorpions. pp73-87. In "Dermatological Manual of Outdoor Hazards", Trevino J. & Chen A.Y.eds. Springer, Cham.
- REIS M.B., ELIAS-OLIVEIRA J., PASTORE M.R., RAMOS S.G., GARDINASSI L.G. & FACCIOLI L.H., 2020. Interleukin-1 receptor-induced nitric oxide production in the pancreas controls hyperglycemia caused by scorpion envenomation. *Toxins*, 12 (3): 163.
- REIS M.B., RODRIGUES F.L., LAUTHERBACH N., KANASHIRO A., SORGI C.A., MEIRELLES A.F.G., SILVA C.A.A., ZOCCAL K.F., SOUZA C.O.S., RAMOS S.G., MATSUNO A.K., ROCHA L.B., SALGADO H.C., NAVEGANTES L.C.C., KETTELHUT I.C., CUPO P., GARDINASSI L.G. & FACCIOLI L.H., 2020. Interleukin-1 receptor-induced PGE<sub>2</sub> production controls acetylcholine-mediated cardiac dysfunction and mortality during scorpion envenomation. *Nature Communications*, 11 (1): 5433.
- RIANO-UMBARILA L., ROJAS-TREJO V.M., ROMERO-MORENO J.A., COSTAS M., UTRERA-ESPINDOLA I., OLAMENDI-PORTUGAL T., POSSANI L.D. & BECERRIL B., 2020. Comparative assessment of the VH-VL and VL-VH orientations of single-chain variable fragments of scorpion toxin-neutralizing antibodies. *Molecular Biology*, 122: 141-147.
- RIBEIRO De ALMEIDA B.R., NORONHA R.C.R., MALCHER S.M., NAGAMACHI C.Y. & PIECZARKA J.C., 2020. Diferenciação cromossômica entre populações do escorpião *Tityus metuendus* Pocock, 1897 (Scorpiones, Buthidae). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- RIBEIRO NETO D.G., CORRÊA Y.G., FERREIRA SILVA K.L. & SEIBERT C.S., 2020. Escorpíoes: Um estudo de caso com estudantes do ensino fundamental. *Ensião, Educação e Ciências Humanas*, 21 (3): ?

- RICHARD S.A., KAMPO S., SACKEY M., HECHAVARRIA M.E. & BUUNAAIM A.D.B., 2020. The pivotal potentials of scorpion *Buthus martensii* Karsch-analgesic-antitumor peptide in pain management and cancer. *Evidence-Based Complementary and Alternative Medicine*, ID 4234273: 1-10.
- RIZWAN AKHTAR M.D., KUMAR A., SINGH B.K.R. & JHA G., 2020. Clinical profile and efficacy of prazosin in scorpion sting envenomation in children at a tertiary care hospital. *Journal of Dental and Medical Sciences*, 19 (5): 5-8.
- ROCHA SANTANA C. & GALVAO OLIVEIRA M., 2020. Evaluation of the use antivenom sera in the emergency service of a regional public hospital in Vitoria da Conquista (BA), Brazil. *Ciência & Saúde Coletiva*, 26 (3): 869-878.
- RODRIGUEZ-CABRERA T.M., TERUEL R. & SAVALL E.M., 2020. Scorpion predation in Cuba: new cases and a review. *Euscorpius*, 306: 1-7.
- RODRIGUEZ-GIL S.G., GONZALEZ S., GIAMBELLUCA L. & GANZALEZ A., 2020. Avance territorial de los escorpiones en la ciudad de La Plata (Argentina). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- ROMERO-IMBACHI M.R., CUPITRA N., ANGEL K., GONZALEZ B., ESTRADA O., CALDERON J.C., GUERRERO-VARGAS J., BELTRAN J. & NARVAEZ-SANCHEZ R., 2020. *Centruroides margaritatus* scorpion complete venom exerts cardiovascular effects through alpha-1 adrenergic receptors. *Comparative Biochemistry and Physiology. Part C: Toxicology & Pharmacology*, 240: 108239.
- ROWE A., 2020. Molecular mechanisms of resistance to lethal scorpion neurotoxins in a scorpion predator. *Toxicon*, 177 (suppl.1): S17.
- SADINE S.E., 2020. New locality of *Orthochirus innesi* Simon, 1910 in Algeria (Scorpiones: Buthidae). *Serket*, 17 (3): 171-175.
- SADINE S.E., DJILANI S. & KERBOUA K.E., 2020. Aperçu sur les scorpions d'Algérie. *Algerian Journal of Health Sciences*, 2 (supp.1): 8-14.
- SANCHEZ-VIALAS A., BLASCO-AROSTEGUI J., GARCIA-GILA J. & LOURENÇO W.R., 2020. A new species of *Troglotayosicus* Lourenço, 1981 (Scorpiones: Troglotayosicidae) from souther Ecuador. *Arachnology*, 18 (6): 612-618.
- SANTIBANEZ-LOPEZ C.E., OJANGUREN-AFFILASTRO A. & SHARMA P., 2020. Another one bites the dust: Taxonomic sampling of a key genus in phylogenomic datasets reveals more non-monophyletic groups in traditional scorpion classification. *Invertebrate Systematics*, 34: 133-143.
- SANTIBANEZ-LOPEZ C. & SHARMA P.P., 2020. Evolutionary novelties in scorpions (Arachnida: Scorpiones). VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- SANTOS LISBOA N., BOERE V. & NEVES F.M., 2020. Scorpionism in the Far South of Bahia, Brazil, 2010-2017: Case profil and factors associated with severity. *Epidemiologia e Serviços de Saude*, 29 (2): e2019345.
- SARHAN M., BADRY A., YOUNES M. & SALEH M., 2020. Genetic diversity within *Leiurus quinquestriatus* (Scorpiones: Buthidae) populations in Egypt as infererd from 16S mDNA sequence analysis. *Zoology in the Middle East*, 66 (3): 269-276.
- SCHEUCH M., BALDRIAN D., ELGHANDOUR I., HARRAUER E., HÔRWEG C., LEINENBACH L., PAUSER I., SALZER F., TRAPEL L., VÔLKER S. & WURZENBERGER J., 2020. Der Skorpion von Krems - Status des nörlichsten Vorkommens von *Euscorpius tergestinus*. *BCBEA*, 5 (1): 3-16.
- SEGUEV N., GAVISH-REGEV E. & BERGER-TAL O., 2020. Sit-and-wait prey: First field observations of scorpions preying on antlions (Neuroptera). *Israel Journal of Ecology and Evolution*, 66 (1-2): 57-62.
- SEITER M., FRIEDL N. & COZIEN A.C., 2020. Life history aspects of the buthid scorpion *Tityus forcipula* (gervais, 1843) with remarks on ists thermal limits. *Journal of Arachnology*, 48 (2): 161-168.

- SHAHI M., DAVOODIAN P., DAVARIDOLATABADI N. & SHAHI M., 2020. A cause of hematuria following *Hemiscorpius acanthocercus* (Scorpiones: Hemiscorpiidae) sting in South of Iran. *Hormozgan Medical Journal*, 24 (1): 1-3.
- SHAHI M., MOOSAVY S.H. & SANAEI-ZADEH H., 2020. Severe hemoglobinuria due to *Hemiscorpius enischnochela* (Scorpiones: Hemiscorpiidae) envenomation from south of Iran. *Journal of Emergency Practice and Trauma*, 6 (2): 121-125.
- SHAHI M. & SANAEI-ZADEH H., 2020. Clinical manifestations of *Compsobuthus persicus* scorpion envenomation in Southern Iran. *Iranian Journal of Toxicology*, 14 (3): 171-178.
- SHAHRAHADI E., MORADI M.S., REZAEIAN M., SALIMABADI Y., ESMAEILI RANJBAR A., MOINADDINI Sh. & SANJI RAFSANJANI M., 2020. The epidemiological study of clinical signs and outcomes of patients with scorpion stings referred to Emergency Department of Rafsanjan Ali-Ibn-Abitaleb Hospital in 2017-2018: A descriptive study. *Journal of Rafsanjan University of Medical Sciences*, 19 (7): 713-726.
- SHAHRAM N., ALIREZA S. & ALIZERA P., 2020. Survey of the measurable characteristics for the detection of the sexual dimorphism of the *Hottentotta saulcyi* scorpion. *Experimental Animal Biology*, 8 (3): 71-78.
- SHAMOON Z., PETERFY R.J., HAMMOUD S. & KHAZAENI B., 2020. Scorpion toxicity. In "Statpearls". Treasure island (FL): StatPearls Publishing.
- SHARMA P.P., BALLESTEROS J.A., GAINETT G., ONTANO A.Z., SANTIBANEZ-LOPEZ C.E. & SETTON E.V.W., 2020. The nexus of phylogenomics and development: What does evodevo tell us about phylogeny of "Arachnida". VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- SHIBAKURA A.A.K., MORAES D.M. dos S., AQUINO R.G. & de JESUS G.J., 2020. Notificações por picada de escorpião em um município do Noreste Paulista. *Unifunec Ciências da Saude e Biologicas*, 3 (6): 1-11.
- SHOUKRI N.M., SALEM M.L., TELEB W.K., ABDEL DAIM M.M. & ABDEL-RAHMAN M.A., 2020. Antinociceptive, antiinflammatory, and antipyretic effects induced by the venom of Egyptian scorpion *Androctonus amoreuxi*. *The Journal of Basic and Applied Zoology*, 81: 56.
- SHRESTHA B. & DÖRR T., 2020. Scorpions (Arachnida: Scorpiones) of Nepal: literature review and field notes. *Arachnology*, 18 (5): 430-435.
- SIFI A., ADI-BESSALEM S. & LARABA-DJEBARI F., 2020. Involvement of the endothelin receptor type A in the cardiovascular inflammatory response following scorpion envenomation. *Toxins (Basel)*, 12 (6): E389.
- SILVA K.O, ROCHA M.A., BORBA DA SILVA M., ALVES DA ROCHA A., FRAGA R.E., NISHIYAMA P.B., SOUSA DE QUEIROZ T., SILVA PEREIRA K.S., DA SILVA MENDES J., BARREIRAS O.A., TORRES BRITO J.A. & MARINA AMORIM ROCHA M.A., 2020. Levantamento e aspectos epidemiologicos de aracnideos de importância médico no município de Vitoria da Conquista - Bahia, Brasil. *Brazilian Applied Science Review*, 4 (3): 1626-1649.
- SILVA H., LIRA A., PONTES W. & MAIA A., 2020. Evidência comportamental de reconhecimento sexual mediado por semioquímicos em *Tityus pusillus* Pocock, 1893. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- SILVA M.A, SOUZA T.G., MELO M.E.G., SILVA J.M., LIMA J.R., LIRA A.F.A., de AGUIAR-JUNIOR F.C.A., MARTINS R.D., JORGE R.J.B., CHAGAS C.A., TEIXEIRA V.W. & TEIXEIRA A.A.C., 2020. *Tityus stigmurus* venom causes genetic damage in blood and testicular cells and affects the number and morphology of gametogenic lineage cells in mice. *Toxicon*, 185: 114-119.
- 2020 SILVA de OLIVEIRA S.M., BERTANI R., QUISPE TORREZ P.P., LOPES de SOUSA P.R., QUIROGA M.M.M., BERTOLOZZI M.R. & DE SIQUEIRA FRANCA F.O., 2020. Electric shock sensation in the first reports of envenomations by *Tityus strandi* in the Brazilian Amazon. *Toxicon*, 178: 8-12.
- SIMONE Y., 2020. From morphology to performance: chela usage in scorpion defensive behavior. VI° Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.

- SNYDER S.S., GLEATON J.W., KIRUI D., CHEN W. & MILLENBAUGH N.J., 2020. Antifungal activity of synthetic scorpion venom-derived peptide analogues against *Candida albicans*. *International Journal of Peptide Research and Therapeutics*, 7: 1844 (1-14).
- SOFIZADEH A., KALTEH E.A., SAEEDI S. & BAVANI M.M., 2020. The first data on the fauna and geographical distribution of medically important scorpions in Golestan Province, Northeast of Iran. *BMC research Notes*, 10pp.
- SOOPRAMANIAN M., KHAN N.A., ABDALLA S.A.O., SAGATHEVAN K. & SIDDIQUI R., 2020. Scorpion and frog organ lysates are potential source of antitumor activity. *Asian Pacific Journal of Cancer Prevention*, 21 (10): 3011-3018.
- SOOPRAMANIAN M., KHAN N.A., GHIMIRE A., SAGATHEVAN K. & SIDDIQUI R., 2020. *Heterometrus spinifer*. An untapped source of anti-tumor molecules. *Biology*, 9 (7): 1-15.
- STAHLAVSKY F., NGUYEN P., SADILEK D., STUNDLOVA J., JUST P., HADDAD C.R., KOÇ H., RANAWANA K.B., STOCKMANN M., YAGMUR E.A. & KOVARIK F., 2020. Evolutionary dynamics of rDNA clusters on chromosomes of buthid scorpions (Chelicerata: Arachnida). *Biological Journal of the Linnean Society*, 131 (3): 547-565.
- SULAKHE S., DANDEKAR N., MUKHERJEE S., PANDEY M., KETKAR M., PADHYE A. & BASTAWADE D., 2020. A new species of *Isometrus* (Scorpiones: Buthidae) from southern India. *Euscorpius*, 310: 1-13.
- SULAKHE S., DANDEKAR N., PADHYE A. & BASTAWADE D., 2020. Two new cryptic species of *Isometrus* (Scorpiones: Buthidae) from the northern Western Ghats, India. *Euscorpius*, 305: 1-26.
- SULAKHE S., DESHPANDE S., DANDEKAR N., KETKAR M., GOWANDE G., PADHYE A. & BASTAWADE D., 2020. Two new species of *Chiromachetes* (Scorpiones: Hormuridae) from the northern Western Ghats, India. *Euscorpius*, 320: 1-27.
- SULAKHE S., DESHPANDE S., DANDEKAR N., KETKAR M., PADHYE A. & BASTAWADE D., 2020. A new cryptic species of *Scorpiops* Peters, 1861 (Scorpiones: Scorpiopidae) from the northern Western Ghats, India. *Euscorpius*, 327: 1-18.
- SULAKHE S., SAYYED A., DESHPANDE S., DANDEKAR N., PADHYE A. & BASTAWADE D., 2020. Taxonomic validity of *Neoscorpiops deccanensis*, *N. tenuicauda*, *N. satarensis* and *N. maharashtraensis* with description of a new species of *Neoscorpiops* Vachon, 1980 (Scorpiones: Euscorpiidae) from India. *Journal of the Bombay Natural History Society*, 117: ??
- TAJTI G., WAI D.C.C., PANYI G. & NORTON R.S., 2020. The voltage-gated potassium channel Kv1.3 as a therapeutic target for venom-derived peptides. *Biochemical Pharmacology*, 181: 114146.
- TANG D., YANG Y., XIAO Z., XU J., YANG Q., DAI H., LIANG S., TANG C., DONG H. & LIU Z., 2020. Scorpion toxin inhibits the voltage-gated proton channel using a  $Zn^{2+}$ -like long-range conformational coupling mechanism. *British Journal of Pharmacology*, 177 (10): 2351-2364.
- TANIELE-SILVA J., MARTINS L.G., BARROSO de SOUSA M., MOREIRA de SOUSA L., CARDOSO R.M.B., VALASCO S.R.U., SANTOS RAMOS G. dos, TORRES de PIRANDA C., MOURA A.A., ANDERSON L. & BASSI E.J., 2020. Retrospective clinical and epidemiological analysis of scorpionism at a referral hospital for the treatment of accidents by venomous animals in Alagoas State, Northeast Brazil, 2007-2017. *Revista do Instituto de medicina Tropical de São Paulo*, 62: 1-15.
- TAVARES A.V., MEDEIROS de ARAUJO K.A., RADAN de VASCONCELOS MARQUES M. & LEITE R., 2020. Epidemiology of the injury with venomous animals in the state of Rio Grande do Norte, Northeast of Brazil. *Ciência & saude Coletiva*, 25 (5): 1967-1978.
- TERUEL R. & DUROCHER R., 2020. First record of *Centruroides marcanoii* Armas, 1981 (Scorpiones: Buthidae) from Haiti. *Boletín del grupo de Sistemática y Ecología de Artropodos Caribenos*, 5: 1-5.



- TERUEL R., FORCELLEDO L.J., & YONG S., 2020. Otro caso de depredación de lagartos por escorpiones en Cuba. *Boletín del Grupo de Sistemática y Ecología de Artrópodos Caribenos*, 7: 1-4.
- TERUEL R. & QUESTEL K., 2020. A new Lesser Antillean scorpion of the genus *Didymocentrus* Kraepelin, 1905 (Scorpiones: Diplocentridae). *Euscorpius*, 313: 1-15.
- TERUEL R. & RODRIGUEZ-CABRERA T.M., 2020. Revision of the genus *Tityopsis* Armas, 1974 (Scorpiones: Buthidae). Part 1. General updates and description of four new species. *Euscorpius*, 304: 1-42.
- TOLENTINO JUNIOR D.S., MIRANDA DE ASSIS E., CARLOS DE OLIVEIRA R., BISPO DE SOUSA MARQUES A., SOUZA FARIAS B., MEDEIROS LEANDRO J., SILVEIRA PAULO L., CALDEIRA DA SILVA M.E. & COLARES VILELA L., 2020. Epidemiological and clinical aspects of scorpion envenomation in Machacalis, Minas Gerais, Brazil, from 2016 to 2017. *Dr. Sulaiman Al Habib Medical Journal*, 2 (3): 128-135.
- TORABI E., BEHDANI M., KHALAJ V., BAGHERI K.P. & SHAHBAZZADEH D., 2020. Complete neutralization of the lethality of *Hemiscorpius lepturus* crude venom by a novel anti-recombinant phospholipase D1 IgGs. *Toxicon*, 183: 36-43.
- TORFI H.R., JALALI M.R., ESMAEILZADEH S. & VARZI H.N., 2020. Biochemical study on cardiotoxic effects of *Mesobuthus eupeus* scorpion venom and the role of antivenom and carvedilol in rats. *Iranian Veterinary Journal*, 16 (2): 89-98.
- TOURINHO A.L., PESSOA-SILVA M., ORTIZ C.R., OVIEDO-DIEGO M. & SALVATIERRA L., 2020. Ordem menores de aracnídeos, menos especialistas mulheres? Qual a extensão e impacto do preconceito de gênero na subárea? VIº Congr. Latino Amer. Aracnol., Buenos Aires, 14-18 diciembre 2020.
- TRAN T.H., 2020. Recherche sur les espèces et la distribution des scorpions dans la région central nord du Vietnam. (en Vietnamien). Thèse Acad. Sci. Technol. Hanoi, 164pp.
- TROPEA G., FET V., PARMAKELIS A., KOTSAKIOZI P., STATHI I. & ZAFEIRIOU S., 2020. *Euscorpius lesbiacus* sp.n., a new species of scorpion from Lesvos Island, Greece (Scorpiones: Euscorpiidae). *Revista Ibérica de Aracnologia*, 37: 185-195.
- TROPEA G. & ONNIS C., 2020. A remarkable discovery of a new scorpion genus and species from Sardinia (Scorpiones: Chactioidea: Belisariidae). *Arachnida - Rivista Aracnologica Italiana*, 26: 3-25.
- TROPEA G. & OZIMEC R., 2020. Another new species of *Euscorpius* Thorell, 1876 from the caves of Croatia and Bosnia-Herzegovina (Scorpiones: Euscorpiidae), with notes on biogeography and cave ecology. *Euscorpius*, 308: 1-13.
- TUNCAY M.E., IPTEC B.O., BINGOL O., CALISKANTURK M., NESELIOGLU S. & EREL O., 2020. Exchange of thiol-disulfide pairs in scorpion envenomation, *International Journal of Medical Biochemistry*, 3 (3): 1504.
- TERUEL R. & TURIEL C., 2020. The genus *Buthus* Leach, 1815 (Scorpiones: Buthidae) in the Iberian Peninsula. Part 1: four redescrptions and six new species. *Revista Ibérica de Aracnologia*, 37: 3-60.
- URETA C., GONZALEZ E.J., RAMIREZ-BARRON M., CONTRERAS-FELIX G.A. & SANTIBANEZ-LOPEZ C.E., 2020. Climate change will have an important impact on scorpion's fauna in its most diverse country, Mexico. *Perspectives in Ecology and Conservation*, 18 (2): 116-123.
- VALDEZ-VELAZQUEZ L.L., CID-URIBE J., ROMERO-GUTTIERREZ M.T., OLAMENDI-PORTUGAL T., JIMENEZ-VARGAS J.M. & POSSANI L.D., 2020. Transcriptomic and proteomic analyses of the venom and venom glands of *Centruroides hirsutipalpus*, a dangerous scorpion from Mexico. *Toxicon*, 179: 21-32.
- VASQUES GOMES J., FERREIRA FE N., REBOUÇAS SANTOS H.L., JUNG B., FERREIRA BISNETO P., SACHETT A., MOURAO de MOURA V., MENDONÇA da SILVA I., CARDOSO de MELO G., PEREIRA de OLIVEIRA PARDAL P., LACERDA M., SAMPAIO V., WEN F.H.,

- de ALMEIDA GONÇALVES SACHETT J. & MONTEIRO W.M., 2020. Clinical profile of confirmed scorpion stings in a referral center in Manaus, Western Brazilian Amazon. *Toxicon*, 187: 245-254.
- VAUCEL J., LE BLOND du PLOUY N., COURTOIS A., BRAGANÇA C. & LABADIE M., 2020. *Euscorpis flavicaudis* sting is not lethal but not harmless either: First record of neurological symptoms in child after sting. *Toxicologie Analytique et Clinique*, 32 (1): 85-88.
- VAUCEL J., MUTRICY R., HOARAU M., PUJO J.M., ELENGA N., LABADIE M. & KALLEL H., 2020. Pediatric scorpionism in northern Amazonia: a 16-year study on epidemiological, environmental and clinical aspects. *Journal of venomous Animals and Tixins including tropical Diseases*, 26: 1-13.
- VELASCO-BOLOM J.L., CORZO G. & GARDUNO-JUAREZ R., 2020. Folding profiles of antimicrobial scorpion venom-derived peptides on hydrophobic surfaces: a molecular dynamics study. *Journal of Biomolecular Structure & Dynamics*, 38 (10): 2928-2938.
- VILLA-MANZANO A.I., JIMENEZ-BERNARDINO J.A., VAZQUEZ-SOLIS G. & PALOMERO-AVILA F.M., 2020. Comparacion de la efectividad del tratamiento de picadura de alacran por Guia de Practica Clinica versus Dosis reducida. estudio de Cohorte. *Archivos en Medicina Familiar*, 22 (2): 53-59.
- VILLELA S.A., 2020. Optimisation de la production d'antivenin de scorpion recombinant par voie biotechnologique : étude de la température d'induction et modélisation de la biocinétique des souches d'E. coli. Thèse Vétérinaire, Toulouse, INSA.
- VIQUEZ C., 2020. Aracnofauna (Arachnida) de la isla del Coco, Costa Rica, con la descripción de tres nuevas especies. *Revista de Biología Tropical*, 68 (suppl.1): 115-143.
- VISSER J.H. & GEERTS S., 2020. Describing sexual dimorphism and fine scale spatial distributions in the drab sick-tail scorpion, *Parabuthus planicauda*. *African Zoology*, 55 (3): 250-256.
- VISSER J.H., GEERTS S. & Van VUUREN B.J., 2020. Phylogeographic patterns in a semi-lithophilous burrowing scorpion, *Opisthophthalmus pallipes* from South Africa. *Zoological Science*, 38 (1): ?.
- VISSOCI J.R., 2020. Bottlenecks for access to treatment of snakebites and scorpion stings, with special attention to clinical consequences. *Toxicon*, 177 (suppl.1): S18.
- WALESIK M., 2020. Resting site choice depends on age in *Opisthacanthus madagascariensis* (Scorpiones: Hormuridae) in dry deciduous forest, western Madagascar. *Malagasy Nature*, 14: 38-43.
- WALI A., WUBULIKASIMU A., YANHUA G., OMAR A., ARKEN A., YILI A. & AISA H.A., 2020. Separation and purification of antioxidant peptides from enzymatically prepared scorpion (*Buthus martensii* Karsch) protein hydrolysates. *International Journal of Peptide Research and Therapeutics*, 26: 1803-1818.
- WANG X., ZHANG S., ZHU Y., ZHANG Z., SUN M., CHENG J., XIAO Q., LI G. & TAO J., 2020. Scorpion toxins from *Buthus martensii* Karsch (BmK) as potential therapeutic agents for neurological disorders: State of the art and beyond. *IntechOpen*, 1-21.
- WANG X.G., ZHU D.D., LI N., HUANG Y.L., WANG Y.Z., ZHANG T., WANG C.M., WANG B., PENG Y., GE B.Y., LI S. & ZHAO J., 2020. Scorpion venom heat-resistant peptide is neuroprotective against cerebral ischemia-reperfusion injury in association with the NMDA-MAPK pathway. *Neuroscience Bulletin*, 36: 243-253.
- WEN F.H., 2020. Public health policies to better manage the burden of scorpion sting envenoming. *Toxicon*, 177 (suppl.1): S1-S2.
- WEN F.H., MONTEIRO W.M., SCHEIDT J.F., ANDRADE L., YE J., STATON C.A., GERARDO C.J. & VISSOCI J.R.N., 2020. Geographical distribution and health care disparities of scorpion stings in Brazil. *Toxicon*, 182 (suppl.1): S24-S25.

- WENDRUFF A.J., BABCOCK L.E., WIRKNER C.S., KLUESSENDORF J. & MIKULIC D.G., 2020. A Silurian ancestral scorpion with fossilised internal anatomy illustrating a pathway to arachnid terrestrialisation. *Scientific Reports*, 10:14.
- WIJESOORIYA K.B., WEERASEKARA L.S. & RANAWANA K.B., 2020. Diversity of scorpions (Arachnida: Scorpiones) in Polonnaruwa Arachaeological Reszerve, Sri Lanka. *Journal of Threatened Taxa*, 12 (15): 17121-17128.
- YAO P., QU X.M., REN S.A., REN X.D., SU N., ZHAO N.A., WANG L., CHENG L., WENG B.B., SUN F.J. & HUANG Q., 2020. Scorpion primer PCR analysis for genotyping of allele variants to thiopurine s-methyltransferase 3. *Molecular Medicine Reports*, 22 (3): 1994-2002.
- YGLESIAS-RIVERA A., VIERA-MORALES A.Z., TORRES-VILTRES J.R., OCHOA-CARDENTY & SUAREZ-PEREZ Y., 2020. Validation of modified Lowry for determination of total protein concentration of *Rhopalurus junceus* scorpion venom. *Biomedical Journal of Scientific & Technical Research*, 28 (3): 21627-21632.
- YOSHIMOTO Y., MIYASHITA M., ABDEL-WAHAB M., SARHAN M., NAKAGAWA Y. & MIYAGAWA H., 2020. Characterization of insecticidal peptides from the venom of the north african scorpion, *Buthacus leptochelys*. *Toxicon*, 177 (suppl.1): S62.
- YOSHIMOTO Y., TANAK M., MIYASHITA M., ABDEL-WAHAB M., MEGALY A.M.A., NAKAGAWA Y. & MIYAGAWA H., 2020. A fluorescent compound from the exuviae of the scorpion, *Liocheles australasiae*. *Journal of Natural Products*, 83 (2): 542-546.
- YTHIER E. & CHEVALIER J., 2020. Description of the males of *Auyantepuia aluku* Ythier, 2018, *A. kelleri* (Lourenço, 1997) and *A. laurae* Ythier, 2015, from French Guiana (Scorpiones, Chactidae). *Bulletin de la Société entomologique de France*, 125 (3): 257-268.
- YTHIER E., CHEVALIER J. & GANGADIN A., 2020. Description of *Tityus (Archaeotityus) kukututee* sp.n. from Suriname, with comments on related species (Scorpiones: Buthidae). *Arachnida - Rivista Aracnologica Italiana*, 27: 36-51.
- YTHIER E., CHEVALIER J. & LOURENÇO W.R., 2020. A synopsis of the genus *Ananteris* Thorell, 1891 (Scorpiones: Buthidae) in French Guiana, with description of four new species. *Arachnida - Rivista Aracnologica Italiana*, 28: 2-33.
- YTHIER E. & RICHARD T., 2020. Description of a new cave-dwelling species of *Liocheles* Sundevall, 1833 (Scorpiones: Hormuridae) from Sumatra. *Revista Ibérica de Aracnologia*, 37: 159-164.
- YU J., LUO Y., JIN H., LV J., ZHOU T., YABASIN I.B. & WEN Q., 2020. Scorpion alleviates bone cancer pain through inhibition of bone destruction and glia activation. *Molecular Pain*, 16: 1-9.
- YU C., YU H. & LI P., 2020. Highlights of animal venom research on the geographical variations of toxin components, toxicities and envenomation therapy. *International Journal of Biological Macromolecules*, 165 (Pt B): 2994-3006.
- ZANETTA S., GERMINO C., RODRIGUES I. & WARAGAIA A., 2020. Urbanization and increased cases of scorpionism in Brazilian cities. *European Journal of Public Health*, 30 (supp.5): V589-V590.
- ZHANG X.Y. & ZHANG P.Y., 2020. Scorpion venoms in gastric cancer (Review). *Oncology Letters*, 20 (5): 196.
- ZHAO F., WANG J.L., MING H.Y., ZHANG Y.N., DUN Y.Q., ZHANG J.H. & SONG Y.B., 2020. Insights into the binding mode and functional components of the analgesic-antitumor peptide from *Buthus martensii* Karsch to human voltage-gated sodium channel 1.7 based on dynamic simulation analysis. *Journal of Biomolecular Structure and Dynamics*, 38 (6): 1868-1879.
- ZHAO L., ZHU J., WANG T., LIU C., SONG N., WU S., QIAO W., ZHU M. & ZHAO J., 2020. A novel *Buthus martensii* Karsch chlorotoxin derivative for glioma SPECT imaging. *New Journal of Chemistry*, 44: 14947-14952.

ZHU S.Y., GAO B., PEIGNEUR S. & TYTGAT J., 2020. How a scorpion toxin selectively captures a prey sodium channel: The molecular and evolutionary basis uncovered. *Molecular Biology and Evolution*, msaa 152: 1-35.

ZHU W., GAO H., LUO X., YE X., DING L., HAO J., SHU Z., LI S., LI J. & CHEN Z., 2020. Cloning and identification of a new multifunctional ascaris-type peptide from the hemolymph of *Buthus martensii* Karsch. *Toxicon*, 184: 167-174.

ZOU X., HE Y., SHEN L., XI C., HE J., ZHANG F., ZHAO F. & CAO Z., 2020. Activation of voltage-gated sodium channels by BmKNT1 augments NMDA receptor function through Src family kinase signaling pathway in primary cerebellar granule cell cultures. *Neuropharmacology*, 180: 108291.

ZOU X., WANG Y., YU Y., HE J., ZHAO F., XI C., ZHANG C. & CAO Z., 2020. BmK NSP, a new sodium channel activator from *Buthus martensii* Karsch, promotes neurite outgrowth in primary cultured spinal cord neurons. *Toxicon*, 182: 13-20.

ZOUZRA Z., BENBAKH S., EL KARIMI S. & BOUMZEBRA D., 2020. Tricuspid valve endocarditis following a scorpion sting: A case report. *World Journal for Pediatric and Congenital Heart Surgery*, 11 (3): 374-376.

## NOUVEAUX TAXA DE SCORPIONS 2020.

Gérard DUPRE

### Avertissement.

Plusieurs publications ont été éditées cette année remettant en cause d'autres publications sortis peu de temps avant. A coup de synonymies et de revalidations, la systématique des scorpions devient un "champ de bataille" pour diverses équipes. Notre rôle n'est pas de dire qui a raison et qui a tort; nous répercutons ces données en laissant le lecteur seul juge sur ces pratiques de plus en plus fréquentes. Mais la scorpionologie n'en ressort pas grandie!

Au-delà de cet avertissement il faut noter que cette année 2020 a été d'une extrême richesse en terme de nouveautés avec un record pour les descriptions d'espèces nouvelles. L'année la plus dense avait été 2006 avec 83 nouvelles espèces et 2020 en totalise 101 sans compter les espèces revalidées et les sous-espèces dont le statut a changé.

### BELISARIIDAE:

*Sardoscorpium* Tropea & Onnis, 2020 gen.n.

*Sardoscorpium troglophilus* Tropea & Onnis, 2020 sp.n. (Italie: Sardaigne)

Tropea et Onnis élèvent la sous-famille des Belisariinae au rang de famille des Belisariidae Lourenço, 1998.

### BOTHRIURIDAE:

*Urophonius araucano* Ojanguren-Affilastro, 2020 sp.n. (Argentine)

*Urophonius pehuenche* Ojanguren-Affilastro & Pizarro-Araya, 2020 sp.n. (Chili)

### BUTHIDAE:

*Aegaeobuthus nigrocinctus bishri* Lourenço, 2020b ssp.n. (Syrie)

*Ananteris canalera* Miranda & Armas, 2020 sp.n. (Panama)

*Ananteris dacostai* Ythier, Chevalier & Lourenço, 2020 sp.n. (Guyane française)

*Ananteris mamilihpan* Ythier, Chevalier & Lourenço, 2020 sp.n. (Guyane française)

*Ananteris pierrekondre* Lourenço, Chevalier, Gangadin & Ythier, 2020 sp.n. (Surinam)

*Ananteris sipilili* Ythier, Chevalier & Lourenço, 2020 sp.n. (Guyane française)

*Ananteris tresor* Ythier, Chevalier & Lourenço, 2020 sp.n. (Guyane française)

*Buthus alacanti* Teruel & Turiel, 2020 (Espagne)

*Buthus apiatus* Lourenço, El Bouhissi & Sadine, 2020 sp.n. (Algérie)

*Buthus baeticus* Teruel & Turiel, 2020 sp.n. (Espagne)

*Buthus delafontei* Teruel & Turiel, 2020 sp.n. (Espagne)

*Buthus garcialorcai* Teruel & Turiel, 2020 sp.n. (Espagne)

*Buthus manchego* Teruel & Turiel, 2020 sp.n. (Espagne)

*Buthus pococki* Kovarik, St'ahlavsky & Elmi, 2020 sp.n. (Somaliland). Ces auteurs élèvent au rang d'espèce *Buthus occitanus zeylensis* Pocock, 1900.

*Buthus serrano* Teruel & Turiel, 2020 sp.n. (Espagne)

*Buthus somalilandus* Kovarik, St'ahlavsky & Elmi, 2020 sp.n. (Somaliland)

*Compsobuthus tureli* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020a sp.n. (Maroc)

*Compsobuthus ullrichi* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020a sp.n. (Egypte)

*Grosphus mavo* Lourenço & Rossi, 2020 sp.n. (Madagascar)

- Vingt espèces du genre *Grosphus* ont été reclassée dans le genre *Teruelius* par Lowe et Kovarik en 2019. Lourenço et Rossi les reclassent dans le genre *Grosphus* et synonymisent *Teruelius* avec *Grosphus*.

- *Grosphus garciai* devient sous-espèce: *Grosphus hirtus garciai* Lourenço, 2001.

- Les espèces suivantes sont extraites de leur synonymies: *Grosphus halleuxi*, *Grosphus mandena*, *Grosphus simoni*, *Grosphus makay*, *Grosphus rossii*.

*Isometrus amboli* Sulakhe, Dandekar, Padhye & Bastawade, 2020 sp.n. (Inde)

*Isometrus kovariki* Sulakhe, Dandekar, Mukherjee, Pandey, Ketkar, Padhye & Bastawade, 2020 sp.n. (Inde)

*Isometrus tamhini* Sulakhe, Dandekar, Padhye & Bastawade, 2020 sp.n. (Inde)

*Janalychas granulatus* Mirza, 2020 sp.n. (Inde)

*Janalychas keralaensis* Mirza, 2020 sp.n. (Inde)

- Mirza transfère *Lychas aareyensis* Mirza et Sanap, 2010 dans le genre *Reddyanus*.

*Leiurus dekeyseri* Lourenço, 2020a sp.n. (Mauritanie)

*Leiurus gubanensis* Kovarik & Lowe, 2020 sp.n. (Somaliland)

*Leiurus kuwaiti* Lourenço, 2020c sp.n. (Koweït)

*Leiurus saharicus* Lourenço, 2020e sp.n. (Mali)

*Lychas kotao* Lourenço, 2020d sp.n. (Thaïlande)

*Orthochirus birulai* Kovarik, Fet & Yagmur, 2020 sp.n. (Pakistan)

- Dans le même article les auteurs synonymisent *Paraorthochirus blandini* Lourenço & Vachon, 1997 avec *Orthochirus fuscipes* (Pocock, 1900). (Signalons à ces auteurs que le genre *Paraorthochirus* a été synonymisé avec *Orthochirus* par Navidpour et al. en 2018)

- Ils synonymisent *Orthochirus melanurus* forma  $\gamma$  *concolor* Birula, 1898 avec *O. melanurus* (Kessler, 1874) (Signalons à ces auteurs que *Orthochirus melanurus* forma  $\gamma$  *concolor* avait été synonymisé avec *Orthochirus scrobiculosus concolor* par Birula en 1917).

- Ils synonymisent *Butheolus melanurus dentatus* Birula, 1900 avec *O. persa* (Birula, 1900) (Signalons à ces auteurs que *Butheolus melanurus dentatus* avait été synonymisé avec *Orthochirus scrobiculosus dentatus* par Fet en 1989).

- Enfin, *Afghanorthochirus erardi* Lourenço & Vachon, 1997 est synonymisé avec *O. persa* alors que le genre *Afghanorthochirus* est synonyme d'*Orthochirus* depuis 2004!

*Orthochirus formozovi* Kovarik, Fet & Yagmur, 2020 sp.n. (Afghanistan, Iran, Tadjikistan, Turkménistan)

*Orthochirus grosseri* Kovarik, Fet & Yagmur, 2020 sp.n. (Ouzbékistan)

*Orthochirus hormozganens* Kovarik & Navidpour, 2020 sp.n. (Iran)

*Orthochirus kermanensis* Kovarik & Navidpour, 2020 sp.n. (Iran)

*Orthochirus kryzhanovskyi* Kovarik, Fet & Yagmur, 2020 sp.n. (Pakistan)

*Orthochirus kucerai* Kovarik & Navidpour, 2020 sp.n. (Iran)

*Orthochirus mashipouri* Kovarik & Navidpour, 2020 sp.n. (Iran)

*Orthochirus nordmanni* Kovarik, Fet & Yagmur, 2020 sp.n. (Afghanistan)

*Orthochirus sejnai* Kovarik, Fet & Yagmur, 2020 sp.n. (Iran)

*Orthochirus semnanensis* Kovarik & Navidpour, 2020 sp.n. (Iran)

*Orthochirus vignolii* Kovarik & Navidpour, 2020 sp.n. (Iran)

*Reddyanus justii* Kovarik, Lowe & St'ahlavsky, 2020 sp.n. (Laos)

*Tityobuthus orangea* Lourenço, Waeber & Wilmé, 2020 sp.n. (Madagascar)

*Tityopsis mulata* Teruel & Rodriguez-Cabrera, 2020 sp.n. (Cuba)

*Tityopsis pumila* Teruel & Rodriguez-Cabrera, 2020 sp.n. (Cuba)

*Tityopsis canizaresorum* Teruel & Rodriguez-Cabrera, 2020 sp.n. (Cuba)

*Tityopsis sheylae* Teruel & Rodriguez-Cabrera, 2020 sp.n. (Cuba)

*Tityus (Atreus) jaimiei* Miranda, Bermudez, Florez & Armas, 2020 sp.n. (Panama, Costa Rica)

*Tityus (Archaeotityus) kukututee* Ythier, Chevalier & Gangadin, 2020 sp.n. (Surinam)

- Kovarik, Fet et Siyam revalident *Orthochirus olivaceus* (Karsch, 1881) et synonymisent *Orthochirus aristidis* (Simon, 1882) avec *Orthochirus olivaceus*.

#### **CHAERILIDAE:**

*Chaerilus chubluk* Lourenço, Tran & Pham, 2020 sp.n. (Vietnam)

*Chaerilus kautti* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020b sp.n. (Thaïlande)

*Chaerilus pulcherrimus* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020b sp.n. (Laos)

#### **DIPLOCENTRIDAE:**

*Didymocentrus martinicae* Teruel & Questel, 2020 sp.n. (Martinique)

#### **EUSCORPIIDAE:**

*Euscorpius biokovenssis* Tropea & Ozimec, 2020 sp.n. (Croatie, Bosnie-Herzégovine)

*Euscorpius bonacinai* Kovarik & St'ahlavsky, 2020 sp.n. (Albanie)

*Euscorpius janstai* Kovarik & St'ahlavsky, 2020 sp.n. (Macédoine du Nord)

*Euscorpius kabateki* Kovarik & St'ahlavsky, 2020 sp.n. (Grèce)

*Euscorpius lesbiacus* Tropea, Fet, Parmakelis, Kotsakiozi, Stathi & Zafeiriou, 2020 sp.n. (Grèce)

*Euscorpius sadileki* Kovarik & St'ahlavsky, 2020 sp.n. (Serbie)

*Euscorpius scheraboni* Kovarik & St'ahlavsky, 2020 sp.n. (Grèce)

*Euscorpius studentium* Karaman, 2020 sp.n. (Monténégro)

*Euscorpius thracicus* Kovarik, Lowe, Byronova & Sty'ahlavsky, 2020 sp.n. (Bulgarie)

#### **HORMURIDAE:**

*Chiromachetes parakrami* Sulakhe, Deshpande, Dandekar, Ketkar, Gowande, Padhye & Bawaskar, 2020 sp.n. (Inde)

*Chiromachetes ramdasswamii* Sulakhe, Deshpande, Dandekar, Ketkar, Gowande, Padhye & Bawaskar, 2020 sp.n. (Inde)

*Liocheles oranghutan* Ythier & Richard, 2020 sp.n. (Sumatra)

*Iomachus (Africanoiomachus)* Lourenço, 2020f subgen.n.

*Iomachus (Africanoiomachus) ineichi* Lourenço, 2020f sp.n. (Mozambique). Lourenço revalide *Iomachus borana* (Di Caporiacco, 1939).

#### **SCORPIONIDAE:**

*Pandinurus awalei* Kovarik, Lowe & Elmi, 2020 sp.n. (Somaliland)

- Ces auteurs revalident *Pandinurus intermedius* (Borelli, 1919) (Ethiopie) et *Pandipalpus lowei* Kovarik, 2012 (Ethiopie)

Dans un article conséquent Prendini et Loria donnent les résultats suivants:

- Le genre *Rugodentus* Bastawade et al., 2005 est revalidé après avoir été synonymisé avec *Heterometrus* par Rossi en 2016. Il en résulte que *Rugodentus keralaensis* Bastawade et al., 2005, est revalidée ainsi que la sous-famille des Rugodentinae qui est élevée au rang de famille, les Rugodentidae.

- Les Heterometrinae Simon, 1879 et les Opisthophthalminae Rossi, 2016 sont élevés au rang de sous-famille.

- Les sous-genres *Pandinus (Pandinopsis)* Vachon, 1974 et *Pandinurus (Pandipalpus)* Rossi, 2015 sont élevés au rang de genres avec *Pandinopsis dictator* (Pocock, 1888) et *Pandipalpus viatoris* (Pocock, 1890).

- 10 nouvelles synonymies sont proposées:

- Pandinopsini Rossi, 2016 = Pandininae Thorell, 1876.
- Protophthalmi Rossi, 2016 = Opisthophthalminae Rossi, 2016.
- *Protophthalmus* Lawrence, 1969 = *Opisthophthalmus* C.L. Koch, 1837.
- *Pandinoides* (*Dunlopandinoides*) Rossi, 2016 = *Pandinoides* Fet, 2000.
- *Pandinurus* (*Pandicaporiaccous*) Rossi, 2015 = *Pandiborellius* Rossi, 2015.
- *Buthus defensor* C.L. Koch, 1837 = *Pandinurus gregoryi* (Pocock, 1896).
- *Buthus heros* C.L. Koch, 1837 = *Pandinurus exitialis* (Pocock, 1888).
- *Pandinus lowei* Kovařík, 2012 = *Pandipalpus viatoris* (Pocock, 1890) [Prendini avait déjà effectué cette synonymisation en 2016!]
- *Pandinurus* (*Pandipalpus*) *pygmaeus* Rossi, 2015 = *Pandipalpus viatoris* (Pocock, 1890) [Prendini avait déjà effectué cette synonymisation en 2016!]
- *Pandinus intermedius* Borelli, 1919 = *Pandinurus citernii* (Borelli, 1919).
- Trois anciens sous-genres d' *Heterometrus* Ehrenberg, 1828 sont revalidés et élevés au rang de genre: *Chersonesometrus* Couzijn, 1978, *Javanimetrus* Couzijn, 1981 et *Srilankametrus* Couzijn, 1981 et le sous-genre *Gigantometrus* Couzijn, 1978 est également élevé au rang de genre. Deux nouveaux genres sont décrits, *Deccanometrus* et *Sahyadrimetrus* avec huit nouvelles espèces sont décrites:
  - *Chersonesometrus bastawadei*, sp. n. (Inde)
  - *Chersonesometrus hendersoni*, sp. n. (Inde)
  - *Chersonesometrus nathanorum*, sp. n. (Inde)
  - *Chersonesometrus shivashankari*, sp. n. (Inde)
  - *Sahyadrimetrus mathewi*, gen.n. et sp. n. (Inde)
  - *Sahyadrimetrus tikaderi*, gen.n. et sp. n. (Inde)
  - *Srilankametrus couzijni*, sp. n. (Inde)
  - *Srilankametrus pococki*, sp. n. (Sri Lanka)
- Le genre *Heterometrus* sensu stricto est limité à huit espèces du sous-genre nominotypique, *Heterometrus* (*Heterometrus*) alors que toutes les autres espèces, anciennement placées dans ce genre sont transférées dans les nouveaux genres appropriés. Cinq espèces sont revalidées et deux sous-espèces sont élevées au rang d'espèce, ce qui donne 28 nouvelles combinaisons:
  - *Chersonesometrus beccaloniae* (Kovařík, 2004), comb. n. (Inde)
  - *Chersonesometrus fulvipes* (C.L. Koch, 1837), comb. n. (Inde)
  - *Chersonesometrus madraspatensis* (Pocock, 1900), comb. n. (Inde)
  - *Chersonesometrus pelekomanus* (Couzijn, 1981), comb. n. et stat. rev. (Inde)
  - *Chersonesometrus tristis* (Henderson, 1919), comb. n. (Inde)
  - *Chersonesometrus wroughtoni* (Pocock, 1899), comb. n. (Inde)
  - *Deccanometrus bengalensis* (C.L. Koch, 1841), comb. n. (Chine, Inde, Népal)
  - *Deccanometrus latimanus* (Pocock, 1894), comb. n. (Pakistan)
  - *Deccanometrus liurus* (Pocock, 1897), comb. n. (Inde)
  - *Deccanometrus obscurus* (Couzijn, 1981), comb. et stat. n. (Inde)
  - *Deccanometrus phipsoni* (Pocock, 1893), comb. n. (Inde)
  - *Deccanometrus ubicki* (Kovařík, 2004), comb. n. (Inde)
  - *Deccanometrus xanthopus* (Pocock, 1897), comb. n. (Inde)
  - *Gigantometrus swammerdami* (Simon, 1872), comb. n. (Inde)
  - *Gigantometrus titanicus* (Couzijn, 1981), comb. n. et stat. rev. (Sri Lanka)
  - *Heterometrus glaucus* (Thorell, 1876), comb. n. et stat. rev. (Indonésie, Nicobar)



- *Heterometrus laevigatus* (Thorell, 1876), comb. n. et stat. rev. (Thaïlande, Myanmar, Malaisie)
  - *Heterometrus silenus* (Simon, 1884), comb. n. et stat. rev. (Vietnam, Cambodge)
  - *Javanimetrus cyaneus* (C.L. Koch, 1836), comb. n. (Indonésie, Inde, Nicobar, Malaisie, Philippines, Thaïlande)
  - *Sahyadrimetrus barberi* (Pocock, 1900), comb. n. (Inde)
  - *Sahyadrimetrus kanarensis* (Pocock, 1900), comb. n. (Inde)
  - *Sahyadrimetrus rugosus* (Couzijn, 1981), comb. et stat. n. (Inde)
  - *Sahyadrimetrus scaber* (Thorell, 1876), comb. n. (Inde)
  - *Srilankametrus caesar* (C.L. Koch, 1841), comb. n. et stat. rev. (Inde)
  - *Srilankametrus gravimanus* (Pocock, 1894), comb. n. (Sri Lanka)
  - *Srilankametrus indus* (DeGeer, 1778) comb. n. (Sri Lanka)
  - *Srilankametrus serratus* (Pocock, 1900), comb. n. (Sri Lanka)
  - *Srilankametrus yaleensis* (Kovařík et al., 2019), comb. n. (Sri Lanka)
- Enfin, 27 nouvelles synonymies sont proposées:
- *Scorpio leioderma* Dufour, 1856 = *Sahyadrimetrus scaber* (Thorell, 1876).
    - *Palamnaeus costimanus* var.  $\beta$  *borneensis* Thorell, 1876 = *Heterometrus longimanus* (Herbst, 1800).
    - *Palamnaeus liophysa* Thorell, 1888 = *Heterometrus longimanus* (Herbst, 1800).
    - *Palamnaeus oatesii* Pocock, 1900 = *Heterometrus petersii* (Thorell, 1876).
    - *Palamnaeus swammerdami flavimanus* Pocock, 1900 = *Gigantometrus swammerdami* (Simon, 1872).
    - *Heterometrus liophysa* var. *madoerensis* Kopstein, 1921 = *Heterometrus glaucus* (Thorell, 1876).
    - *Heterometrus laevifrons* Roewer, 1943 = *Heterometrus glaucus* (Thorell, 1876).
    - *Heterometrus* (*Chersonesometrus*) *granulomanus* Couzijn, 1981 = *Srilankametrus caesar* (C.L. Koch, 1841).
    - *Heterometrus* (*Heterometrus*) *liophysa separatus* Couzijn, 1981 = *Heterometrus glaucus* (Thorell, 1876).
    - *Heterometrus* (*Heterometrus*) *liophysa spartanicus* Couzijn, 1981 = *Heterometrus glaucus* (Thorell, 1876).
    - *Heterometrus* (*Heterometrus*) *longimanus bengkalitensis* Couzijn, 1981 = *Heterometrus longimanus* (Herbst, 1800).
    - *Heterometrus* (*Heterometrus*) *longimanus marmoratus* Couzijn, 1981 = *Heterometrus longimanus* (Herbst, 1800).
    - *Heterometrus* (*Heterometrus*) *petersii mindanaensis* Couzijn, 1981 = *Heterometrus silenus* (Simon, 1884).
    - *Heterometrus* (*Heterometrus*) *spinifer solitarius* Couzijn, 1981 = *Heterometrus spinifer* (Ehrenberg, 1828).
    - *Heterometrus* (*Srilankametrus*) *indus laevitensus* Couzijn, 1981 = *Srilankametrus indus* (DeGeer, 1778).
    - *Heterometrus* (*Heterometrus*) *keralaensis* Tikader and Bastawade, 1983 = *Sahyadrimetrus rugosus* (Couzijn, 1981).
    - *Heterometrus cimrmani* Kovařík, 2004 = *Heterometrus laevigatus* (Thorell, 1876).

- *Heterometrus mysorensis* Kovařík, 2004 = *Chersonesometrus tristis* (Henderson, 1919).
- *Heterometrus nepalensis* Kovařík, 2004 = *Deccanometrus bengalensis* (Pocock, 1900).
- *Heterometrus rolciki* Kovařík, 2004 = *Sahyadrimetrus scaber* (Thorell, 1876).
- *Heterometrus sejnai* Kovařík, 2004 = *Javanimetrus cyaneus* (C.L. Koch, 1836).
- *Heterometrus tibetanus* Lourenço et al., 2005 = *Deccanometrus bengalensis* (Pocock, 1900).
- *Heterometrus liangi* Zhu and Yang, 2007 = *Heterometrus silenus* (Simon, 1884).
- *Heterometrus telanganaensis* Javed et al., 2010 = *Deccanometrus xanthopus* (Pocock, 1897).
- *Heterometrus atrascorpius* Mirza et al., 2012 = *Chersonesometrus beccaloniae* (Kovařík, 2004).
- *Heterometrus minotaurus* Plíšková et al., 2016 = *Heterometrus laevigatus* (Thorell, 1876).
- *Heterometrus bastawadei* Rossi, 2016 = *Rugodentus keralaensis* Bastawade et al., 2005.

#### SCORPIOPIDAE:

*Euscorpiops lii* Di & Qiao, 2020a sp.n. (Chine)

*Neoscorpiops phaltanensis* Sulakhe, Sayyed, Deshpande, Dandekar, Padhye & Bastawade, 2020 sp.n. (Inde)

*Scorpiops furai* Kovarik, 2020 sp.n. (Inde)

*Scorpiops grosseri* Kovarik, 2020 sp.n. (Inde)

*Scorpiops harmsi* Kovarik, 2020 sp.n. (Népal)

*Scorpiops hofereki* Kovarik, 2020 sp.n. (Pakistan)

*Scorpiops kejvali* Kovarik, 2020 sp.n. (Inde)

*Scorpiops songi* Di & Qiao, 2020b sp.n. (Chine)

*Scorpiops telbaila* Sulakhe, Deshpande, Dandekar, Ketkar, Padhye & Bastawade, 2020 sp.n. (Inde)

*Scorpiops tryznai* Kovarik, 2020 sp.n. (Inde)

*Scorpiops wrzecionkoi* Kovarik, 2020 sp.n. (Chine)

*Scorpiops yagmuri* Kovarik, 2020 sp.n. (Pakistan)

*Scorpiops zubairi* Kovarik, 2020 sp.n. (Pakistan)

- Kovarik élève au rang d'espèce *Scorpiops petersii vonwicki* Birula, 1913 alors qu'il avait lui-même synonymisé cette sous-espèce avec *Scorpiops petersii* en 2000!

Kovarik et al. (2020c) décrivent un certain nombre d'espèces nouvelles du genre *Scorpiops* dont les types sont "emmagasinés" dans la collection personnelle de Kovarik. Ils ne sont donc pas accessibles à d'autres chercheurs qui pourraient émettre des doutes sur ses "nouveaux" taxa. Dans le même article, sont proposés une foule de synonymisations de genres, sous-genres et espèces décrits par Vachon puis par Lourenço. Nous pensons que ces modifications systématiques méritent une étude scientifique complémentaire pour valider ou invalider ces données. Nous les signalons à titre indicatif.

*Scorpiops bastawadei* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)

*Scorpiops birulai* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)

*Scorpiops ciki* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Myanmar)

*Scorpiops dii* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)

*Scorpiops dunlopi* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)  
*Scorpiops kautti* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)  
*Scorpiops krabiensis* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)  
*Scorpiops pakseensis* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Laos)  
*Scorpiops phatoensis* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)  
*Scorpiops prasiti* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)  
*Scorpiops scheibeae* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)  
*Scorpiops schumacheri* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)  
*Scorpiops sherwoodae* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)  
*Scorpiops solegladi* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Vietnam)  
*Scorpiops thailandus* Kovarik, Lowe, Stockmann & St'ahlavsky, 2020 sp.n. (Thaïlande)

Il établi également les résultats suivants:

- Les genres *Alloscorpiops* Vachon, 1980, *Dasyscorpiops* Vachon, 1974, *Euscorpiops* Vachon, 1980, *Neoscorpiops* Vachon, 1980, *Plethoscorpiops* Lourenço, 2017, et *Vietscorpiops* Lourenço & Pham, 2015, ainsi que le sous-genre *Alloscorpiops* (*Laoscorpiops*) Lourenço, 2013, sont synonymisés avec le genre *Scorpiops* Peters, 1862.

- De nouvelles synonymies sont prononcées:

- *Scorpiops* (*Vietscorpiops*) *dentidactylus* Lourenço & Pham, 2015 = *Scorpiops farkaci* Kovařík, 1993

- *Euscorpiops karschi* Lourenço, Zhu & Qi, 2005 = *Scorpiops novaki* (Kovařík, 2005)

- *Scorpiops atomatus* Qi, Zhu & Lourenço, 2005 = *Scorpiops tibetanus* Hirst, 1911

- *Scorpiops pococki* Zhu, Qi & Lourenço, 2005 = *Scorpiops tibetanus* Hirst, 1911

- *Euscorpiops validus* Di et al., 2010 = *Scorpiops vachoni* (Zhu et al., 2005)

Comme nous pouvons le constater ces modifications concernent essentiellement des espèces décrites par Lourenço et al.! Ceci devient une habitude!

#### TROGLOTAYOSICIDAE:

*Troglotayosicus muranunka* Sanchez-Vialas, Blasco-Arostegui, Garcia-Gila & Lourenço, 2020 sp.n. (Equateur)

#### VAEJOVIDAE:

*Vaejovis elii* Ayrey, 2020 (USA)

Jochim et al. synonymisent *Vaejovis brysoni* Ayrey & Webber, 2013 avec *Vaejovis deboerae* Ayrey, 2009.

#### SYSTEMATIQUE GENERALE.

Santibanez-Lopez et al. transfèrent la famille des Caraboctonidae, précédemment inclus dans la superfamille des Iuroidea Thorell, 1876 dans la super-famille des Caraboctonoidea (nouveau rang). La super-famille des Hadruroidea (nouveau rang) est établie et la sous-famille des Hadrurinae Stahnke, 1973 est élevé au rang de famille, les Hadruridae.

#### Références.

AYREY R.F. A new species of *Vaejovis* from Mingus Mountain, northern Arizona (Scorpiones: Vaejovidae). *Euscorpius*, 303: 1-14.

DI Z. & QIAO S., 2020a. *Euscorpiops lii* sp.nov. and key of the genus *Euscorpiops* Vachon, 1980 (Scorpiones, Scorpiopidae) from China. *ZooKeys*, 968: 71-83.

- DI Z. & QIAO S., 2020b. *Scorpiops songi* sp.n. and key to species of *Scorpiops* from China (Scorpiones: Scorpiopidae). *Arthropoda Selecta*, 29 (3): 316-324.
- JOCHIM E.E., BOUSSARD L.L.M. & HENDRIXSON B.E. Integrative species delimitation and taxonomic status of the scorpion genus *Vaejovis* Koch, 1836 (Vaejovida) in the Santa Catalina Mountains, Arizona. *Euscorpius*, 316: 1-11.
- KARAMAN I., 2020. A new *Euscorpius* species (Scorpiones: Euscorpiidae) from a Dinaric cave - the first record of troglobite scorpion in European fauna. *Biologia Serbica*, 42: 1-18.
- KOVARIK F., 2020. Nine new species of *Scorpiops* Peters, 1861 (Scorpiones: Scorpiopidae) from China, India, Nepal, and Pakistan. *Euscorpius*, 302: 1-43.
- KOVARIK F., FET V. & SIYAM M., 2020. Taxonomic position of *Orthochirus olivaceus* (Karsch, 1881), the type species of the genus *Orthochirus* Karsch, 1892 (Scorpiones: Buthidae). *Euscorpius*, 319: 1-15.
- KOVARIK F., FET V. & YAGMUR E.A., 2020. Further review of *Orthochirus* Karsch, 1892 (Scorpiones: Buthidae) from Asia: taxonomic position of *O. melanurus*, *O. persa*, *O. scrobiculosus*, and description of six new species. *Euscorpius*, 318: 1-73.
- KOVARIK F. & LOWE W., 2020. Scorpions of the Horn of Africa (Arachnida: Scorpiones). Part XXIV. *Leiurus* (Buthidae), with description of *Leiurus gubanensis* sp.n. *Euscorpius*, 309: 1-19.
- KOVARIK F., LOWE G., BYRONOVA M. & ST' AHLAVSKY F., 2020. *Euscorpius thracicus* sp.n. (Scorpiones: Euscorpiidae) from Bulgaria. *Euscorpius*, 326: 1-17.
- KOVARIK F., LOWE G. & ELM I H.Sh.A., 2020. Scorpions of the Horn of Africa (Arachnida&: Scorpiones). Part XXV. Description of *Pandinurus awalei* sp.n. and the male of *Pandiborellius somalilandus* (Kovarik, 2012), with remarks on recent synonymies (Scorpionidae: Pandininae). *Euscorpius*, 322: 1-21.
- KOVARIK F., LOWE G. & ST' AHLAVSKY F., 2020. *Reddyanus justii* sp.n. from Laos (Scorpiones: Buthidae). *Euscorpius*, 321: 1-11.
- KOVARIK F., LOWE W., STOCKMANN M. & ST' AHLAVSKY F., 2020a. Notes on *Compsobuthus*: redescription of *C. arabicus* Levy et al., 1973 from Arabia, and description of two new species from North Africa (Scorpiones: Buthidae). *Euscorpius*, 1-40.
- KOVARIK F., LOWE G., STOCKMANN M. & ST' AHLAVSKY F., 2020b. Two new *Chaerilus* from Thailand and Laos (Scorpiones: Chaerilidae). *Euscorpius*, 324: 1-20.
- KOVARIK F., LOWE G., STOCKMANN M. & ST' AHLAVSKY F., 2020c. Revision of genus-group taxa in the family Scorpiopidae Kraepelin, 1905, with description of 15 new species (Arachnida: Scorpiones). *Euscorpius*, 352: 1-140.
- KOVARIK F. & NAVIDPOUR S., 2020. Six new species of *Orthochirus* Karsch, 1892 from Iran (Scorpiones: Buthidae). *Euscorpius*, 312: 1-41.
- KOVARIK F. & ST' AHLAVSKY F., 2020. Five new species of *Euscorpius* Thorell, 1876 (Scorpiones: Euscorpiidae) from Albania, Greece, North Macedonia, and Serbia. *Euscorpius*, 1-37.
- KOVARIK F., ST' AHLAVSKY F. & ELM I H.Sh.A., 2020. Scorpions of the Horn of Africa (Arachnida: Scorpiones). Part XXIII. *Buthus* (Buthidae), with description of two new species. *Euscorpius*, 307: 1-32.
- LOURENÇO W.R., 2020a. Why does the number of dangerous species of scorpions increase? The particular case of the genus *Leiurus* Ehrenberg (Buthidae) in Africa. *Journal of venomous animals and Toxins including Tropical Diseases*, 26: 1-9.
- LOURENÇO W.R., 2020b. A possible relict population of *Mesobuthus (Aegaeobuthus?) nigrocinctus* (Ehrenberg, 1828) in the Bishri Mountains of Syria (Scorpiones: Buthidae). *Serket*, 17 (2): 77-86.
- LOURENÇO W.R., 2020c. First record and description of a new species of *Leiurus* Ehrenberg from Kuwait (Scorpiones: Buthidae). *Serket*, 17 (2): 143-149.
- LOURENÇO W.R., 2020d. A new species of *Lychas* C.L. Koch, 1845 from Ko Tao Island, Thailand (Scorpiones: Buthidae). *Revista Ibérica de Aracnologia*, 36: 59-64.

- LOURENÇO W.R., 2020e. A remarkable new species of *Leiurus* Ehrenberg, 1828 from the North Deserts of Mali (Scorpiones: Buthidae). *Revista Ibérica de Aracnologia*, 37: 147-152.
- LOURENÇO W.R., 2020f. Nouvelles considérations taxonomiques sur le genre *Iomachus* Pocock, 1893 (Scorpiones: Hormuridae), et en particulier sur les espèces africaines. *Revista Ibérica de Aracnologia*, 37: 205-211.
- LOURENÇO W.R., CHEVALIER J., GANGADIN A. & YTHIER E., 2020. Description of a new species of *Ananteris* Thorell, 1891, from Suriname (Scorpiones, Buthidae). *Bulletin de la société entomologique de France*, 3: 233-239.
- LOURENÇO W.R., EL BOUHISSI M. & SADINE S.E., 2020. Further considerations on the *Buthus* Leach present in Algeria with description of a new species (Scorpiones: Buthidae). *Revista Ibérica de Aracnologia*, 36: 103-108.
- LOURENÇO W.R., ROSSI A., WILME L., RAHERILALAO M.J., SOARIMALALA V. & WAEBER P.O., 2020. The remarkable diversity of the genus *Grosphus* Simon, 1880 (Scorpiones: Buthidae) in Southern Madagascar and in particular in the region of Cap Sainte Marie. *Arachnida - Rivista Aracnologica Italiana*, 27: 2-35.
- LOURENÇO W.R., TRAN T.H. & PHAM D.S., 2020. The genus *Chaerilus* Simon, 1877, in Vietnam with the description of a new species found in a volcanic cave (Scorpiones, Chaerilidae). *Bulletin de la Société Entomologique de France*, 125 (1): 19-28.
- LOURENÇO W.R., WAEBER P.O. & WILME L., 2020. New taxonomic considerations on the genus *Tityobuthus* Pocock, 1890, and description of a new species (Scorpiones, Buthidae). *Bulletin de la Société entomologique de France*, 125 (4): 371-381.
- MIRANDA R.J., BERMUDEZ S., FLOREZ D. E. & De ARMAS L.F., 2020. A new species of *Tityus* from Panama and Costa Rica previously identified as *Tityus pachyurus* Pocock, 1897 (Scorpiones: Buthiade). *Revista Ibérica de Aracnologia*, 37: 197-204.
- MIRANDA R.J. & De ARMAS L.F., 2020. A new species of *Ananteris* (Scorpiones: Buthidae) from Panama. *Euscorpius*, 297: 1-7.
- MIRZA Z.A., 2020. Two new species of buthid scorpion of the genus *Janalychas* Kovarik, 2019 (Arachnida: Scorpiones: Buthidae) from the Western Ghats, India. *Arachnology*, 18 (4): 316-324.
- OJANGUREN-AFFILASTRO A.A. & PIZARRO-ARAYA J., 2020. Phylogenetic analysis of the winter and southernmost scorpion genus *Urophonius* Pocock, 1893 (Bothriuridae), with the description of two new Patagonian species. *Zoologischer Anzeiger*, 289: 50-66.
- PRENDINI L. & LORIA S.F., 2020. Systematic revision of the Asian forest scorpions (Heterometrinae Simon, 1879), revised suprageneric classification of Scorpionidae Latreille, 1802, and revalidation of Rugodentidae Bastawade et al., 2005. *Bulletin of the American Museum of Natural History*, 442 (1): 1-480.
- SANCHEZ-VIALAS A., BLASCO-AROSTEGUI J., GARCIA-GILA J. & LOURENÇO W.R., 2020. A new species of *Troglotayosicus* Lourenço, 1981 (Scorpiones: Troglotayosicidae) from souther Ecuador. *Arachnology*, 18 (6): 612-618.
- SANTIBANEZ-LOPEZ C.E., OJANGUREN-AFFILASTRO A. & SHARMA P., 2020. Another one bites the dust: Taxonomic sampling of a key genus in phylogenomic datasets reveals more non-monophyletic groups in traditional scorpion classification. *Invertebrate Systematics*, 34: 133-143.
- SULAKHE S., DANDEKAR N., MUKHERJEE S., PANDEY M., KEKTAR M., PADHYE A. & BASTAWADE D., 2020. A new species of *Isometrus* (Scorpiones: Buthidae) from southern India. *Euscorpius*, 310: 1-13.
- SULAKHE S., DANDEKAR N., PADHYE A. & BASTAWADE D. Two new cryptic species of *Isometrus* (Scorpiones: Buthidae) from the northern Westrn Ghats, India. *Euscorpius*, 305: 1-26.
- SULAKHE S., DESHPANDE S., DANDEKAR N., KETKAR M., GOWANDE G., PADHYE A. & BASTAWADE D., 2020. Two new species of *Chiromachetes* (Scorpiones: Hormuridae) from the northern Western Ghats, India. *Euscorpius*, 320: 1-27.

- SULAKHE S., DESHPANDE S., DANDEKAR N., KETKAR M., PADHYE A. & BASTAWADE D., 2020. A new cryptic species of *Scorpiops* Peters, 1861 (Scorpiones: Scorpiopidae) from northern Western Ghats, India. *Euscorpius*, 327: 1-18.
- SULAKHE S., SAYYED A., DESHPANDE S., DANDEKAR N., PADHYE A. & BASTAWADE D., 2020. Taxonomic validity of *Neoscorpiops deccanensis*, *N. tenuicauda*, *N. satarensis* and *N. maharashtraensis* with description of a new species of *Neoscorpiops* Vachon, 1980 (Scorpiones: Euscorpiidae) from India. *Journal of the Bombay Natural History Society*, 117: ??
- TERUEL R. & QUESTEL K., 2020. A new lesser Antillean scorpion of the genus *Didymocentrus* Kraepelin, 1905 (Scorpiones: Diplocentridae). *Euscorpius*, 313: 1-15.
- TERUEL R. & RODRIGUEZ-CABRERA T.M., 2020. Revision of the genus *Tityopsis* Armas, 1974 (Scorpiones: Buthidae). Part 1. General updates and description of four new species. *Euscorpius*, 304: 1-42.
- TERUEL R. & TURIEL C., 2020. The genus *Buthus* Leach, 1815 (Scorpiones: Buthidae) in the Iberian Peninsula. Part 1: four redescriptions and six new species. *Revista Ibérica de Aracnologia*, 37: 3-60.
- TROPEA G., FET V., PARMAKELIS A., KOTSAKIOZI P., STATHI I. & ZAFEIRIOU S., 2020. *Euscorpius lesbiacus* sp.n., a new species of scorpion from Lesbos Island, Greece (Scorpiones: Euscorpiidae). *Revista Ibérica de Aracnologia*, 37: 185-195.
- TROPEA G. & ONNIS C., 2020. A remarkable discovery of a new scorpion genus and species from Sardinia (Scorpiones: Chactoidea: Belisariidae). *Arachnida - Rivista Aracnologica Italiana*, 26: 3-25.
- TROPEA G. & OZIMEC R., 2020. Another new species of *Euscorpius* Thorell, 1876 from the caves of Croatia and Bosnia-Herzegovina (Scorpiones: Euscorpiidae) with notes on biogeography and cave ecology. *Euscorpius*, 308: 1-13.
- YTHIER E., CHEVALIER J. & GANGADIN A., 2020. Description of *Tityus (Arachaeotityus) kukututee* sp.n. from Suriname, with comments on related species (Scorpiones: Buthidae). *Arachnida - Rivista Aracnologica Italiana*, 27: 36-51.
- YTHIER E., CHEVALIER J. & LOURENÇO W.R., 2020. A synopsis of the genus *Ananteris* Thorell, 1891 (Scorpiones: Buthidae) in French Guiana, with description of four new species. *Arachnida - Rivista Aracnologica Italiana*, 28: 2-33.
- YTHIER E. & RICHARD T., 2020. Description of a new cave-dwelling species of *Liocheles* Sundevall, 1833 (Scorpiones: Hormuridae) from Sumatra. *Revista Ibérica de Aracnologia*, 37: 159-164.

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**Corrigendum:** DUPRE G., 2020. Nouvelle synthèse sur la reproduction des scorpions. *Arachnides*, 98: 1-16.

Dans cet article figure l'espèce *Physoctonus amazonicus* d'après des références datant de 2009 et 2010. Or cette espèce a été décrite par Lourenço en 2017 et donc il y a très certainement confusion de la part des auteurs de ces références. Il est donc nécessaire d'annuler cette donnée.

## DOSSIER MYGALES

GABRIEL R., SHERWOOD D. & LONGHORN S.J., 2020. The revised taxonomic placement of the genus *Acentropelma* Pocock, 1901 and restoration of the genus *Pseudoschizopelma* Smith, 1995 (Aranei: Theraphosidae). *Arthropoda Selecta*, 29 (4): 453-466.

ABSTRACT. The genus *Acentropelma* Pocock, 1901 is redefined and the type species, *A. spinulosum* F.O. Pickard-Cambridge, 1897 is redescribed. *Pseudoschizopelma* Smith, 1995 gen.rest. is restored to house *Acentropelma macropus* (Ausserer, 1875) creating the restored combination *Pseudoschizopelma macropus* comb.rest. *Acentropelma sorkini* Smith, 1995 syn.n. is considered a junior synonym of *P. macropus* based on indistinguishable palpal bulb, tibial apophysis and spermathecal morphology. The paratype female of former *A. sorkini*, originally designated and described by Smith [1995] is found to be an immature *Brachypelma* Simon, 1891 – possibly *Brachypelma kahlenbergi* Rudloff, 2008. Additional morphological features for *A. gutzkei* are included to complement the original description by Reichling [1997], and its placement discussed.

**SOMMAIRE**

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