



RESUMEN DE LA ACTIVIDAD INVESTIGADORA DEL DEPARTAMENTO DE SISTEMAS FÍSICOS, QUÍMICOS Y NATURALES. CURSO 2019/2020

- . Libros ()
- . Capítulos de libros (6)
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LISTA DE ARTÍCULOS PUBLICADOS:

Área de Cristalografía y Mineralogía

Área de Ecología

- Caroca E., A.Serrano, R.Borja, A.Jiménez, A.Carvajal, A.F.M.Braga, G.Rodríguez-Gutierrez, & F.G.Fermoso. 2021. Influence of phenols and furans released during thermal pretreatment of olive mill solid waste on its anaerobic digestion. *Waste Management*, 120: 202-208
- Fernández-Rodríguez M.J., D. De la Lama Calvente; A. Jiménez-Rodríguez; R. Borja & B. Rincon Llorente. 2021. Evolution of control parameters in biochemical methane potential tests of olive mill solid waste (OMSW), thermal pre-treated OMSW, and its co-digestion with *Dunaliella salina*. *Journal of Applied Phycology*, 33:419–429
- Luna, A., Palma, A., Sanz-Aguilar, A., Tella, J.L. & Carrete, M. 2020. Sex, personality and conspecific density influence natal dispersal with lifetime fitness consequences in urban and rural burrowing owls. *Plos One* 15, e0226089.
- Ascensão, F., Latombe, G., Anadón, J.D., Abellán, P., Cardador, L., Carrete, M., Tella, J.L. & Capinha, C. 2020. Drivers of compositional dissimilarity for native and alien birds: the relative roles of human activity and environmental suitability. *Biological Invasions* 22, 1447–1460.
- Mueller, J.C., Carrete, M., Boerno, S., Kuhl, H., Tella, J.L. & Kempnaers, B. 2020. Synaptic genes as early targets of selection during urban colonization. *Molecular Ecology*.



- Hernández-Brito, D., Blanco, G., Tella, J.L. & Carrete, M. 2020. A protective nesting association with native species counteracts biotic resistance for the spread of an invasive parakeet from urban into rural habitats. *Journal of Zoology* 17, 13.
- Morinha, F., Carrete, M., Tella, J.L. & Blanco, G. 2020. High prevalence of a novel circovirus in sympatric invasive parakeets introduced in Spain from India and South America. *Diversity* 12, 192.
- Palma, A., Blas, J., Tella, J.L., Cabezas, S., Marchant, T.A. & Carrete, M. 2020. Differences in adrenocortical responses between rural and urban birds: poorly-known underlying mechanisms and their implications for conservation. *Conservation Physiology*.
- Moleón, M., Cortés-Avizanda, A., Pérez-García, J.M., Bautista, J., Geoghegan, C., Carrete, M., Amar, A., Sánchez-Zapata, J.A. & Donazar, J.A. 2020. Distribution of avian scavengers inside and outside of protected areas: contrasting patterns between two areas of Spain and South Africa. *Biodiversity and Conservation*.
- Espíndola-Hernández, P., Mueller, J.C., Carrete, M., Boerno, S. & Kempnaers, B. 2020. Genomic evidence for sensorial adaptations to a nocturnal predatory lifestyle in owls. *Genome Biology and Evolution*, evaa166.
- Romero-Vidal, P., Hiraldo, F., Rosseto, F., Blanco, G., Carrete, M. & Tella, J.L. 2020. Opportunistic or non-random wildlife crime? Attractiveness rather than abundance in the wild leads to selective parrot poaching. *Diversity*.
- Baños-Villalba, A., Carrete, M., Tella, J.L., Blas, J., Potti, J., Camacho, C., Diop, M.S., Marchant, T.A., Cabezas, S. & Edelaar, P. 2020. Selection on individuals of introduced species already starts before the actual introduction. *Evolutionary Applications*.
- Serrano, D., Margalida, A., Pérez-García, J.M., Juste, J., Traba, J., Valera, F., Carrete, M., Aihartza, J., Real, J., Mañosa, S., Flaquer, C., Garin, I., Morales, M.B., Alcalde, J.T., Arroyo, B., Sánchez-Zapata, J.A., Blanco, G., Negro, J.J., Tella, J.L., Ibañez, C., Tellería, J.L., Hiraldo, F., Donazar, J.A. 2020. Renewables in Spain threaten biodiversity. *Science*.
- Luna, A., Lois, N.A., Rodríguez-Martínez, S., Palma, A., Sanz-Aguilar, A., Tella, J.L. & Carrete, M. 2021. Urban life promotes delayed dispersal and family living in a non-social bird species. *Scientific Reports*.
- Rivas-Salvador, J., Aguilera-Alcalá, N., Tella, J.L. & Carrete, M. 2021. Assessing the introduction of exotic raptors into the wild from falconry. *Biological Invasions*.
- Hernández-Brito, D., Tella, J.L., Carrete, M. & Blanco, G. 2021. Successful hybridization between non-congeneric parrots in a small introduced population. *Ibis*.
- Ascensão, F., D'Amico, M., Martins, R.C., Rebelo, R., Barbosa, A.M., Bencatel, J., Barrientos, R., Abellán, P., Tella, J.L., Cardador, L., Anadón, J.D., Carrete, M., Murgui, E., Fernandes, P., Santos,



- S.M., Mira, A., Mathias, M.L., Tiago, P., Casabella, E., Reino, L., Paulo, O.S., Pereira, H.M., Capinha, C. 2021. Distribution of alien tetrapods in the Iberian Peninsula. *Neobiota*.
- Hernández-Brito, D., Pedro Romero-Vidal, P., Hiraldo, F., Blanco, G., Díaz-Luque, J.A., Barbosa, J.M., Symes, C.T., White, T.H., Pacífico, E.C., Sebastián-González, E., Carrete, M. & Tella, J.L. 2021. Epizoochory in parrots as an overlooked yet widespread plant-animal mutualism. *Plants*.
 - Blanco, G., Romero-Vidal, P., Carrete, M., Chamorro, D., Bravo, C., Hiraldo, F. & Tella, J.L. 2021. Burrowing Parrots *Cyanoliseus patagonus* as Long-Distance Seed-Dispersers of Keystone Algarrobos, Genus *Prosopis*, in the Monte Desert. *Diversity* 13, 204.
 - Cardador, L., Abellán, P., Anadón, J.D., Carrete, M. and Tella, J.L. 2021. The World Parrot Trade. In: Stephen Pruett-Jones (ed) *Naturalized Parrots of the World. Distribution, Ecology, and Impacts of the World's Most Colorful Colonizers*. Princeton University Press. Princeton and Oxford.
 - Carrete, M., Abellán, P., Cardador, L., Anadón, J.D. and Tella, J.L. 2021. The Fate of Multistage Parrot Invasions in Spain and Portugal. In: Stephen Pruett-Jones (ed) *Naturalized Parrots of the World. Distribution, Ecology, and Impacts of the World's Most Colorful Colonizers*. Princeton University Press. Princeton and Oxford.
 - Hernández-Brito, D., Carrete, M. & Tella, J.L.. 02-06/03/2020. Food dispersal by the invasive ring-necked parakeets. 7th International Frugivores and Seed Dispersal Symposium. Corbett, Uttarakhand, India.
 - Ávila, J. M., Gallardo, A., Ibáñez, B., & Gómez-Aparicio, L. (2021). Pathogen-induced tree mortality modifies key components of the C and N cycles with no changes on microbial functional diversity. *Ecosystems*, 24(2), 451-466. doi:10.1007/s10021-020-00528-1
 - Delgado-Baquerizo, M., Reich, P. B., Bardgett, R. D., Eldridge, D. J., Lambers, H., Wardle, D. A., Fierer, N. (2020). The influence of soil age on ecosystem structure and function across biomes. *Nature Communications*, 11(1) doi:10.1038/s41467-020-18451-3
 - García-Velázquez, L., Rodríguez, A., Gallardo, A., Maestre, F. T., Dos Santos, E., Lafuente, A., Durán, J. (2020). Climate and soil micro-organisms drive soil phosphorus fractions in coastal dune systems. *Functional Ecology*, 34(8), 1690-1701. doi:10.1111/1365-2435.13606
 - Lafuente, A., Durán, J., Delgado-Baquerizo, M., Recio, J., Gallardo, A., Singh, B. K., & Maestre, F. T. (2020). Biocrusts modulate responses of nitrous oxide and methane soil fluxes to simulated climate change in a mediterranean dryland. *Ecosystems*, 23(8), 1690-1701. doi:10.1007/s10021-020-00497-5
 - Lafuente, A., Recio, J., Ochoa-Hueso, R., Gallardo, A., Pérez-Corona, M. E., Manrique, E., & Durán, J. (2020). Simulated nitrogen deposition influences soil greenhouse gas fluxes in a mediterranean dryland. *Science of the Total Environment*, 737 doi:10.1016/j.scitotenv.2020.139610



- Lucas-Borja et al. 2021. Long term forest management drives drought resilience in Mediterranean black pine forest. *Trees*. <https://doi.org/10.1007/s00468-021-02143-6>
- Camarero et al. 2021. Global fading of the temperature-growth coupling at alpine and polar treelines. *Global Change Biology*. <https://doi.org/10.1111/gcb.15530>.
- Batllori et al. 2020. Forest and woodland replacement patterns following drought-related mortality. *PNAS*. <https://doi.org/10.1073/pnas.2002314117>.
- Poyatos et al. 2020. Global transpiration data from sap flow measurements: the SAPFLUXNET database. *Earth System Science Data* esd-2020-227. <https://doi.org/10.5194/essd-2020-227>.
- Camarero et al. 2020. Drought, axe and goats. More variable and synchronized growth forecasts worsening dieback in Moroccan Atlas cedar forests. *Science of The Total Environment*. <https://doi.org/10.1016/j.scitotenv.2020.142752>.
- Ben-Said et al. 2020. Characterizing spatial structure of *Abies marocana* forest through point pattern analysis. *Forest Systems*. 29(2):e014. <https://doi.org/10.5424/fs/2020292-16754>.
- Casas-Gómez et al. 2020. Contrasting Signals of the Westerly Index and North Atlantic Oscillation over the Drought Sensitivity of Tree-Ring Chronologies from the Mediterranean Basin. *Atmosphere* 11(6):644. <https://doi.org/10.3390/atmos11060644>.
- Gazol et al. 2020. Drought legacies are short, prevail in dry conifer forests and depend on growth variability. *Journal of Ecology*. <https://doi.org/10.1111/1365-2745.13435>.
- Bose et al. 2020. Growth and resilience responses of Scots pine to extreme droughts across Europe depend on pre-drought growth conditions. *Global Change Biology*. <https://doi.org/10.1111/gcb.15153>.
- Cobo-Simón et al. 2020. Understanding genetic diversity of relict forests. Linking long-term isolation legacies and current habitat fragmentation in *Abies pinsapo* Boiss. *Forest Ecology and Management* 461(1). <https://doi.org/10.1016/j.foreco.2020.117947>.
- DeSoto et al. 2020. Low growth resilience to drought is related to future mortality risk in trees. *Nature Communications*. 11:545. <https://doi.org/10.1038/s41467-020-14300-5>.
- Kattge et al. 2020 TRY plant trait database – enhanced coverage and open access. *Global Change Biology* 26(1):119-188. <https://doi.org/10.1111/gcb.14904>.
- Federico Morelli, Ricardo A. Rodríguez, Yanina Benedetti, Juan D. Delgado. 2020. Avian roadkills occur regardless of bird evolutionary uniqueness across Europe. *Transportation Research Part D: Transport and Environment* 87: 102531. <https://doi.org/10.1016/j.trd.2020.102531>.
- Federico Morelli, Yanina Benedetti, Juan D. Delgado. 2020. A forecasting map of avian roadkill-risk in Europe: A tool to identify potential hotspots. *Biological Conservation* 249: 108729. <https://doi.org/10.1016/j.biocon.2020.108729>.



- Federico Morelli, Yanina Benedetti, Leszek Jerzak, Jan Kubecka, Juan D. Delgado. 2020. Combining the potential resilience of avian communities with climate change scenarios to identify areas of conservation concern. *Ecological Indicators* 116: 106509. <https://doi.org/10.1016/j.ecolind.2020.106509>.
- Rodrigo Riera, Juan D Delgado, Leopoldo Moro, Rogelio Herrera, Mikel A Becerro. 2020. Difficulties to identify global and local key biodiversity areas in diverse and isolated marine jurisdictions. *Journal of Coastal Conservation* 24, 13: 1-9. <https://doi.org/10.1007/s11852-020-00732-0>.
- Juan D. Delgado, Rodrigo Riera. 2020. Anthropogenic disturbances and conservation of coastal environments in an oceanic archipelago. *Journal of Integrated Coastal Zone Management* 20(4): 249-264. <https://doi.org/10.5894/rqci-n267>.
- Rodrigo Riera, Juan D. Delgado. 2020. Identifying integrative management needs for regional marine policies in a context of human impact in an oceanic archipelago. *Cahiers de Biologie Marine* 61: 61-71.
- José M. Fernández-Palacios, Rüdiger Otto, Rubén Barone, Agustín Naranjo, Juan D. Delgado, José R. Arévalo, Lea de Nascimento. 2020. Los sabinares canarios. *Rincones del Atlántico* 10: 138-155.

Área de Física Aplicada

- M.C. Gordillo "Pairing in $SU(6) \times SU(2)$ one-dimensional fermionic clusters" *Phys. Rev. A* **102** 023335 1-6 (2020).
- M.C. Gordillo, F. de Soto and J. Segovia. "Diffusion Monte Carlo calculations of fully-heavy multiquark bound states" *Phys. Rev. D* **102** 114007 1-20 (2020).
- M.C. Gordillo "Metal and insulator states of $SU(6) \times SU(2)$ clusters of fermions in one dimensional optical lattices" *New. J. Phys.* **23** 063034 1-11 (2021).
- P.-L. Yin, Z.-F. Cui, C.D. Roberts and J. Segovia; "Masses of positive- and negative-parity hadron ground-states, including those with heavy quarks"; *Eur. Phys. J. C* **81** (2021) 327, 22pp.
- G. Yang, J. Ping and J. Segovia; "The $\mathbf{sQ\bar{q}\bar{q}\bar{q}}$ tetraquarks in the chiral quark model"; *Phys. Rev. D* **103** (2021) 074011, 19pp
- F. Fernández and J. Segovia; "Historical introduction to chiral quark models"; *Symmetry* **13** (2021) 252, 9pp.
- L.-K. Yang, X. Luo, J. Segovia and H.-S. Zong; "A brief review of chiral chemical potential and its physical effects"; *Symmetry* **12** (2020) 2095, 19pp.
- C. Chen, C.S. Fischer, C.D. Roberts and J. Segovia; "Form Factors of the Nucleon Axial Current"; *Phys. Lett. B* **815** (2021) 136150, 7pp.



- G. Yang, J. Ping and J. Segovia; “Tetra- and penta-quark structures in the constituent quark model”; *Symmetry* 12 (2020) 1869 78pp.
- J. Segovia (26 additional authors not shown); “Diquark correlations in hadron physics: Origin, impact and evidence”; *Prog. Part. Nucl. Phys.* 116 (2021) 103835, 66pp.
- G. Yang, J. Ping and J. Segovia; “ $QQ\bar{s}b\bar{s}$ tetraquarks in the chiral quark model”; *Phys. Rev. D* 102 (2020) 054023, 18pp.
- Z.-F. Cui, C. Chen, D. Binosi, F. De Soto, C.D. Roberts, J. Rodríguez-Quintero, S.M. Schmidt and J. Segovia; “Nucleon elastic form factors at accessible large spacelike momenta”; *Phys. Rev. D* 102 (2020) 014043, 14pp.
- A.C. Aguilar, F. De Soto, M.N. Ferreira J. Papavassiliou, J. Rodríguez-Quintero “Infrared facets of the three-gluon vertex”; *Phys.Lett.B* 818 (2021) 136352

Área de Física de la Tierra

- Alvarez-Castro MC and Ribera P. Long-Term Climate Variability in the Mediterranean Region. *Atmosphere*. 2020; 11(11):1172. <https://doi.org/10.3390/atmos11111172>
- Chen, K., Breitner, S., Wolf, K., Stafoggia, M., Sera, F., Vicedo-Cabrera, A. M., Guo, Y., Tong, S., Lavigne, E., Matus, P., Valdés, N., Kan, H., Jaakkola, J. J. K., Rytí, N. R. I., Huber, V., Scortichini, M., Hashizume, M., Honda, Y., Nunes, B., ... Schneider, A. (2021). Ambient carbon monoxide and daily mortality: a global time-series study in 337 cities. *The Lancet Planetary Health*, 5(4), e191–e199. [https://doi.org/10.1016/s2542-5196\(21\)00026-7](https://doi.org/10.1016/s2542-5196(21)00026-7)
- Fedele, G., Penduff, T., Pierini, S., Alvarez-Castro, M. C., Bellucci, A., & Masina, S. (2021). Interannual to decadal variability of the Kuroshio extension: analyzing an ensemble of global hindcasts from a dynamical system viewpoint. *Climate Dynamics*. <https://doi.org/10.1007/s00382-021-05751-7>
- Gallego, D., García-Herrera, R., Losada, T., Mohino, E., & Rodríguez de Fonseca, B. (2021). A shift in the wind regime of the southern end of the Canary upwelling system at the turn of the 20th century. *Journal of Geophysical Research: Oceans*, 126, e2020JC017093. <https://doi.org/10.1029/2020JC017093>
- Melgarejo, A. E., Ordoñez, P., Nieto, R., Peña-Ortiz, C., García-Herrera, R., & Gimeno, L. (2021). Mechanisms for Severe Drought Occurrence in the Balsas River Basin (Mexico). *Atmosphere*, 12(3), 368. <https://doi.org/10.3390/atmos12030368>
- Urban, A., Di Napoli, C., Cloke, H. L., Kyselý, J., Pappenberger, F., Sera, F., Schneider, R., Vicedo-Cabrera, A. M., Acquaotta, F., Ragetti, M. S., Íñiguez, C., Tobias, A., Indermitte, E., Orru, H., Jaakkola, J. J. K., Rytí, N. R. I., Pascal, M., Huber, V., Schneider, A., de’ Donato, F., Michelozzi, P., Gasparrini, A. (2021). Evaluation of the ERA5 reanalysis-based Universal Thermal Climate



Index on mortality data in Europe. *Environmental Research*, **198**, 111227.

<https://doi.org/10.1016/j.envres.2021.111227>

- Vega, I., Ribera, P., & Gallego, D. (2020). Characteristics of the Onset, Withdrawal, and Breaks of the Western North Pacific Summer Monsoon in the 1949–2014 Period. *Journal of Climate*, **33**(17), 7371–7389. <https://doi.org/10.1175/jcli-d-19-0734.1>
- Vicedo-Cabrera, N. Scovronick, F. Sera, D. Royé, R. Schneider, A. Tobias, C. Astrom, Y. Guo, Y. Honda, D. M. Hondula, R. Abrutzky, S. Tong, M. de Sousa Zanotti Stagliorio Coelho, P. H. Nascimento Saldiva, E. Lavigne, P. Matus Correa, N. Valdes Ortega, H. Kan, S. Osorio, J. Kyselý, A. Urban, H. Orru, E. Indermitte, J. J. K. Jaakkola, N. Rytí, M. Pascal, A. Schneider, K. Katsouyanni, E. Samoli, F. Mayvaneh, A. Entezari, P. Goodman, A. Zeka, P. Michelozzi, F. de'Donato, M. Hashizume, B. Alahmad, M. Hurtado Diaz, C. De La Cruz Valencia, A. Overcenco, D. Houthuijs, C. Ameling, S. Rao, F. Di Ruscio, G. Carrasco-Escobar, X. Seposo, S. Silva, J. Madureira, I. H. Holobaca, S. Fratanni, F. Acquotta, H. Kim, W. Lee, C. Iniguez, B. Forsberg, M. S. Ragetti, Y. L. L. Guo, B. Y. Chen, S. Li, B. Armstrong, A. Aleman, A. Zanobetti, J. Schwartz, T. N. Dang, D. V. Dung, N. Gillett, A. Haines, M. Mengel, V. Huber & A. Gasparrini (2021). The burden of heat-related mortality attributable to recent human-induced climate change. *Nature Climate Change*, **11**(6), 492–500. <https://doi.org/10.1038/s41558-021-01058-x>

Área de Geodinámica Externa

- Guilén, M. T., Delgado, J., Gómez-Arias, A., Nieto-Liñán, J. M., Castillo, J. 2021. Bioaccessibility and human exposure to metals in urban soils (Huelva, SW Spain): evaluation by in vitro gastric extraction. *Environ Geochem Health*, ISSN: 1573-2983. doi.org/10.1007/s10653-021-00814-4.
- Moral, F. 2020. Los “qanats” o minas de agua del acuífero de Los Alcores y el sistema tradicional de abastecimiento de agua a Sevilla. *Boletín Geológico y Minero*, 131 (1): 61-75. DOI: 10.21701/bolgeomin.131.1.004.
- Moral, F. y Yanes, J.L. 2021. Análisis preliminar de los factores condicionantes de la temperatura de los manantiales kársticos de Andalucía. *Geogaceta*, 70.
- Montes-Vega, M.J. y Rodríguez-Rodríguez, M. 2021. Análisis del hidroperíodo de tres lagunas de la Reserva Biológica de Doñana (2018-2020). *Geogaceta*, 70.
- Rodríguez-Rodríguez, M., Aguilera, H., Guardiola-Albert, C. y Fernández-Ayuso, A. Climate influence vs. anthropogenic drivers in surface water-groundwater interactions in eight ponds of Doñana Natural Area (southern Spain). 2021. *Wetlands*. 41:25. <https://doi.org/10.1007/s13157-021-01425-6>



Área de Geodinámica Interna

- Díaz Azpiroz, M., Fernández, C. (2021) The Southern Iberian Shear Zone (SW Spain): Inclined Transpression Related to Variscan Oblique Convergence in a HT/LP Metamorphic Belt. In: Mukherjee, S. (Ed.) Structural Geology and Tectonics Field Guidebook—Volume1. Springer Nature, Switzerland, 137-166.
- Jiménez-Bonilla, A., Díaz-Azpiroz, M., Expósito, I., Balanyá, J.C. (2021) Miocene-Quaternary Strain Partitioning and Relief Segmentation Along the Arcuate Betic Fold-and-Thrust Belt: A Field Trip Along the Western Gibraltar Arc Northern Branch (Southern Spain). In: Mukherjee, S. (Ed.) Structural Geology and Tectonics Field Guidebook—Volume1. Springer Nature, Switzerland, 103-135.
- Nabavi, S.T., Alavi, S.A., Díaz-Azpiroz, M., Mohammadi, S., Ghassemi, M.R., Fernández, C., Barcos, L., Frehner, M. (2020) Deformation mechanics in inclined, brittle-ductile transpression zones: Insights from 3D finite element modelling. Journal of Structural Geology 137, DOI: <https://doi.org/10.1016/j.jsg.2020.104082>.

Área de Química Física

- E. Mirzad Rafael D. Corbett, A. Cuetos, A. Patti, Self-assembly of freely-rotating polydisperse cuboids: unveiling the boundaries of the biaxial nematic phase. Soft Matter 16, (2020) 5565-5570
- F. A. G. Daza, A. Cuetos, A. Patti, Dynamic Monte Carlo simulations of inhomogeneous colloidal suspensions. Phys. Rev. E 102 (2020) 013302
- A. G. Garcia, R. Tuinier, G. de With, A. Cuetos. Directional-dependent pockets drive columnar-columnar coexistence. Soft Matter 16 (2020), 6720-6724
- F. J. Lobo-Cabrera, A. Patti, F. Govantes, A. Cuetos. Polymer-induced microcolony compaction in early biofilms: A computer simulation study. Phys. Rev. E 103 (2021), 052407

Área de Zoología

- Ferreras-Romero, Manuel & Suhling, Frank; "On the dimorphism shown by the females of *Boyeria irene* (Odonata: Aeshnidae) in a southern Spain population"; Libellula; Supplement 16, 2021, 115-125.
- Reyes-Martínez M^a José, Martínez-Pita Inés, Soler-Navarro Diego, García-García Francisco José; "The impact of salinity changes associated with size on the wedge clam *Donax trunculus* Linnaeus, 1758 (Mollusca: Bivalvia): A laboratory assay"; Estuarine, Coastal and Shelf Science 241, 2020, 106838.
- Samraoui Boudjéma, Bouhala, Zineb, Ruiz García, Antonio, Márquez-Rodríguez, Joaquín, Ferreras-Romero, Manuel, El-Serehy, Hamed & Samraoui, Farrah; "Trichoptera and Plecoptera of



the Seybouse River, northeast Algeria: Distribution, phenology and new records";
Zootaxa; 4845(4), 2020, 552-564.