

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/310670794>

Photography-based taxonomy is inadequate, unnecessary, and potentially harmful for biological sciences

Article in *Zootaxa* · November 2016

DOI: 10.11646/zootaxa.4196.3.9

CITATIONS

0

READS

10

4 authors, including:



[Eliécer E. Gutiérrez](#)

University of Brasília

36 PUBLICATIONS 215 CITATIONS

SEE PROFILE



Photography-based taxonomy is inadequate, unnecessary, and potentially harmful for biological sciences

LUIS M. P. CERÍACO^{1,2*}, ELIÉCER E. GUTIÉRREZ^{3,4}, ALAIN DUBOIS⁵
et al. (see Appendix for the full list of supporting signatories)

¹ Department of Biology, Villanova University, Villanova, United States of America.

² Museu Nacional de História Natural e da Ciência, Lisboa, Portugal.

³ Departamento de Zoologia, Instituto de Ciências Biológicas, Universidade de Brasília, CEP 70910-900, Brasília, DF, Brazil.

⁴ National Museum of Natural History, Smithsonian Institution, Washington DC, United States of America.

⁵ ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.

*corresponding author: luisceriaco@gmail.com

Note

The question whether taxonomic descriptions naming new animal species without type specimen(s) deposited in collections should be accepted for publication by scientific journals and allowed by the *Code* has already been discussed in *Zootaxa* (Dubois & Nemésio 2007; Donegan 2008, 2009; Nemésio 2009*a–b*; Dubois 2009; Gentile & Snell 2009; Minelli 2009; Cianferoni & Bartolozzi 2016; Amorim *et al.* 2016). This question was again raised in a letter supported by 35 signatories published in the journal *Nature* (Pape *et al.* 2016) on 15 September 2016. On 25 September 2016, the following rebuttal (strictly limited to 300 words as per the editorial rules of *Nature*) was submitted to *Nature*, which on 18 October 2016 refused to publish it. As we think this problem is a very important one for zoological taxonomy, this text is published here exactly as submitted to *Nature*, followed by the list of the 493 taxonomists and collection-based researchers who signed it in the short time span from 20 September to 6 October 2016.

Correspondence

In defense of a species description without preserved specimens, a few colleagues recently provided arguments that could lead to widespread use of photography-based taxonomy (PBT) (Pape *et al.* 2016). We 493 collection-based researchers refute these arguments.

The main purpose of the *Code's* Article 73.1.4—which tolerates the naming of species described based on illustrations—is to allow the nomenclatural availability of species names established without reference specimens before the maturity of taxonomy. However, modern descriptions shouldn't be done without *material* evidence through at least one museum 'type' specimen, carrying many characters that cannot be seen on photographs and enabling objectivity, replicability and refutability.

Species delimitation is a matter of taxonomy, not of nomenclature, but taxonomic work requires such a specimen to make an *objective* link between a name and a natural population, without which the allocation of the name remains uncertain.

Alleged species known only from photographs can be referred to by non-scientific names until the collection of a specimen enables acceptable taxonomic descriptions.

Peer-review, which is not required by the *Code*, may indeed be useful for taxonomic works if carried out by competent referees, but it has repeatedly proved insufficient to prevent flawed descriptions. PBT will promote rapid dissemination of poorly reviewed descriptions based on unverifiable "evidence".

PBT is detrimental for fields of biology that depend on taxonomy: impeding approval of permits to collect—a strong nuisance for taxonomy; harming the credibility of and obstructing advances in taxonomy, as untrained/unscrupulous persons can easily flood life "catalogues" with dubious taxa; increasing instability and inaccuracy, as scrutiny is hindered by the lack of specimens.

The *Code* must be reformed to prevent that Articles designed to deal with contributions from the early ages of taxonomy are used to justify outdated practices that can harm science and biodiversity conservation.

References

- Amorim, D.S., Santos, C.M.D., Krell, F.-T., Dubois, A., Nihei, S.S., Oliveira, O.M.P., Pont, A., Song, H., Verdade, V.K., Fachin, D.A., Klassa, B., Lamas, C.J.E., Oliveira, S.S., Carvalho, C.J.B. De, Mello-Patiu, C.A., Hajdu, E., Couri, M.S., Silva, V.C., Capellari, R.S., Falaschi, R.L., Feitosa, R.M., Prendini, L., Pombal, J.P.J., Fernández, F., Rocha, R.M., Lattke, J.E., Caramaschi, U., Duarte, M., Marques, A.C., Reis, R.E., Kurina, O., Takiya, D.M., Tavares, M., Fernandes, D.S., Franco, F.L., Cuzzo, F., Paulson, D., Guénard, B., Schlick-Steiner, B.C., Arthofer, W., Steiner, F.M., Fisher, B.L., Johnson, R.A., Delsinne, T.D., Donoso, D.A., Mulieri, P.R., Patitucci, L.D., Carpenter, J.M., Herman, L. & Grimaldi, D. (2016) Timeless standards for species delimitation. *Zootaxa*, 4137 (1), 121–128.
<http://dx.doi.org/10.11646/zootaxa.4137.1.9>
- Cianferoni, F. & Bartolozzi, L. (2016) Warning: potential problems for taxonomy on the horizon? *Zootaxa*, 4139 (1), 128–130.
<http://dx.doi.org/10.11646/zootaxa.4139.1.8>
- Donegan, T.M. (2008) New species and subspecies descriptions do not and should not always require a dead type specimen. *Zootaxa*, 1761, 37–48.
- Donegan, T.M. (2009) Type specimens, samples of live individuals and the Galapagos Pink Land Iguana. *Zootaxa*, 2201, 12–20.
- Dubois, A. (2009) Endangered species and endangered knowledge. *Zootaxa*, 2201, 26–29.
- Dubois, A. & Nemésio, A. (2007) Does nomenclatural availability of nomina of new species or subspecies require the deposition of vouchers in collections? *Zootaxa* 1409, 1–22.
- Gentile, G. & Snell, H. (2009) *Conolophus marthae* sp. nov. (Squamata: Iguanidae), a new species of land iguana from the Galápagos archipelago. *Zootaxa*, 2201, 1–10.
- Minelli, A. (2009) Commentaries on Gentile & Snell (2009): an introduction. *Zootaxa*, 2201, 11.
- Nemésio, A. (2009a) Nomenclatural availability of nomina of new species should always require the deposition of preserved specimens in collections: a rebuttal to Donegan (2008). *Zootaxa*, 2045, 1–16.
- Nemésio, A. (2009b) On the live holotype of the Galápagos pink land Iguana, *Conolophus marthae* Gentile & Snell, 2009 (Squamata: Iguanidae): is it an acceptable exception? *Zootaxa*, 2201, 21–25.
- Pape, T. (2016) Taxonomy: species can be named from photos. *Nature*, 537, 307–307.
<http://dx.doi.org/10.1038/537307b>
- [International Commission on Zoological Nomenclature] (1999) *International Code of Zoological Nomenclature*. Fourth edition. London, International Trust for Zoological Nomenclature, xxix + 306 pp.

APPENDIX

Full list of and affiliations of supporting signatories

- Cristian Simón Abdala** *Universidad Nacional de Tucumán, Tucumán, Argentina.*
- Abdulaziz S. Alqarni** *King Saud University, Riyadh, Saudi Arabia.*
- Kraig Adler** *Cornell University, Ithaca, USA.*
- Edson A. Adriano** *Federal University of São Paulo, Diadema, Brazil.*
- Erna Aeschl** *Biology Centre of the Upper Austrian Museum, Linz, Austria.*
- Ishan Agarwal** *Villanova University, Villanova, USA.*
- Sabine Agatha** *Universität Salzburg, Salzburg, Austria.*
- Donat Agosti** *Plazi, Bern, Switzerland.*
- Antonio J. C. Aguiar** *Universidade de Brasília, Brasília, Brazil.*
- Jonas José Mendes Aguiar** *Universidade de São Paulo, Ribeirão Preto, Brazil.*
- Dirk Ahrens** *Zoologisches Forschungsmuseum A. Koenig, Bonn, Germany.*
- Alexandre Aleixo** *Museu Paraense Emilio Goeldi, Belem, Brazil.*
- Maria Judite Alves** *Museu Nacional de História Natural e da Ciência, Lisboa, Portugal.*
- Fabio Raposo do Amaral** *Universidade Federal de São Paulo, Diadema, Brazil.*
- Natalia Ananjeva** *Russian Academy of Sciences, St. Petersburg, Russia.*
- Marcelo C. Andrade** *Universidade Federal do Pará, Belém, Brazil.*
- Marco Brandalise de Andrade** *Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil.*
- Franco Andreone** *Museo Regionale di Scienze Naturali, Turin, Italy.*
- Pedro P. U. Aquino** *Universidade de Brasília, Brasília, Brazil.*
- Paula Beatriz Araujo** *Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.*
- Henrard Arnaud** *Royal Museum for Central Africa, Tervuren, Belgium.*
- Jairo Arroyave** *Universidad Nacional Autónoma de México, Ciudad de México, Mexico.*
- Wolfgang Arthofer** *Institute of Ecology, University of Innsbruck, Innsbruck, Austria.*
- Tom J. Artois** *Hasselt University, Hasselt, Belgium.*

Diego Astúa *Universidade Federal de Pernambuco, Recife, Brazil.*
Celso Azevedo *Universidade Federal do Espírito Santo, Vitória, Brazil.*
Justin C. Bagley *Universidade de Brasília, Brasília, Brazil.*
Diego Baldo *Universidad Nacional de Misiones, Félix de Azara, Argentina.*
Helen Margaret Barber-James *Albany Museum, Grahamstown, South Africa.*
Eva V. Bärmann *Zoologisches Forschungsmuseum A. Koenig, Bonn, Germany.*
Cristiane Bastos-Silveira *Museu Nacional de História Natural e da Ciência, Lisboa, Portugal.*
Michael F. Bates *National Museum, Bloemfontein, South Africa.*
Aaron M. Bauer *Villanova University, Villanova, USA.*
Franziska Bauer *Senckenberg Naturhistorische Sammlungen, Dresden, Germany.*
Ricardo C. Benine *Universidade Estadual Paulista, Botucatu, Brazil.*
Daniel J. Bennett *Stephen F. Austin State University, Nacogdoches, USA.*
Bastian Bentlage *National Museum of Natural History, Smithsonian Institution, Washington DC, USA.*
Björn Berning *Landesmuseum, Leonding, Austria.*
Daizy Bharti *Università di Camerino, Camerino, Italy.*
Cibele Biondo *Universidade Federal do ABC, São Bernardo, Brazil.*
José Birindelli *Museu de Zoologia da Universidade Estadual de Londrina, Londrina, Brazil.*
Theo Blick *Senckenberg Research Institute, Frankfurt, Germany.*
Giovanni Boano *Museo Civico di Storia Naturale, Carmagnola, Italy.*
Flávio A. Bockmann *Universidade de São Paulo, Ribeirão Preto, Brazil.*
Wieslaw Bogdanowicz *Muzeum i Instytut Zoologii Polskiej Akademii Nauk, Warsaw, Poland.*
Wolfgang Böhme *Zoologisches Forschungsmuseum A. Koenig, Bonn, Germany.*
Enrico Borgo *Museo Civico di Storia Naturale, Genova, Italy.*
Leo Borkin *Zoological Institute, Russian Academy of Sciences, Saint Petersburg, Russia.*
Marcos Ricardo Bornschein *Universidade Estadual Paulista, São Vicente, Brazil.*
Roger Bour *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
William R. Branch *Port Elizabeth Museum, Port Elizabeth, South Africa.*
Cinthia A. Brasileiro *Universidade Federal de São Paulo, Diadema, Brazil.*
Janet K. Braun *Sam Noble Museum, Norman, USA.*
Gustavo A. Bravo *Museum of Comparative Zoology, Harvard University, Cambridge, USA.*
Luc Brendonck *North West University, Potchefstroom, South Africa.*
Guilherme R. R. Brito *Museu Nacional, Rio de Janeiro, Brazil.*
Marcelo R. Britto *Museu Nacional, Rio de Janeiro, Brazil.*
Paulo A. Backup *Museu Nacional, Rio de Janeiro, Brazil.*
Daniel Burckhardt *Naturhistorisches Museum, Basel, Switzerland.*
Ulrich Burkhardt *Senckenberg Naturkundemuseum, Görlitz, Germany.*
Stephen D. Busack *North Carolina Museum of Natural Sciences, Raleigh, USA.*
Luiz A. Campos *Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.*
Alain Canard *Université de Rennes 1, Rennes, France.*
Eliana M. Canello *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*
Ulisses Caramaschi *Museu Nacional, Rio de Janeiro, Brazil.*
James M. Carpenter *American Museum of Natural History, New York, USA.*
Martin Carr *University of Huddersfield, Huddersfield, UK.*
Renan Carrenho *Universidade Federal de São Paulo, Diadema, Brazil.*
Alexandra Cartaxana *Museu Nacional de História Natural e da Ciência, Lisboa, Portugal.*
Mariom A. Carvajal *North Dakota State University, Fargo, USA.*
Gervásio Silva Carvalho *Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil.*
Marcelo Rodrigues de Carvalho *Universidade de São Paulo, São Paulo, Brazil.*
Amira Chaabane *Faculté des Sciences de Sfax, Sfax, Tunisia.*
Cinthia Chagas *DPTC/PC, Manaus, Amazonas, Brazil.*
Prosanta Chakrabarty *Louisiana State University Museum of Natural Science, Baton Rouge, USA.*
Kailas Chandra *Zoological Survey of India, Kolkata, India.*
Stylianos Chatzimanolis *University of Tennessee, Chattanooga, USA.*
Stephen W. Chordas III *Ohio State University, Columbus, Ohio, USA.*

Alexandre U. Christoff *Museu de Ciências Naturais da Universidade Luterana do Brasil, Canoas, Brazil.*

Fabio Cianferoni *Museo di Storia Naturale dell'Università di Firenze, Florence, Italy.*

Santiago Claramunt *American Museum of Natural History, New York, USA.*

Dan Cogălniceanu *University Ovidius Constanta, Constanta, Romania.*

Bruce B. Collette *National Museum of Natural History, Smithsonian Institution, Washington DC, USA.*

Guarino R. Colli *Universidade de Brasília, Brasília, Brazil.*

Timothy J. Colston *University of Mississippi, Oxford, USA.*

Werner Conradie *Port Elizabeth Museum, Port Elizabeth, South Africa.*

Jérôme Constant *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*

Reginaldo Constantino *Universidade de Brasília, Brasília, Brazil.*

Joseph A. Cook *University of New Mexico, Albuquerque, USA.*

Danilo Cordeiro *Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil.*

Alexandra Marçal Correia *Museu Nacional de História Natural e da Ciência, Lisboa, Portugal.*

Fenton P. D. Cotterill *University of Stellenbosch, Matieland, South Africa.*

Brandi Coyner *Sam Noble Museum, Norman, USA.*

Mario A. Cozzuol *Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.*

Joel Cracraft *American Museum of Natural History, New York, USA.*

Angelica Crottini *CIBIO-Centro de Investigacao em Biodiversidade e Recursos Genéticos, Vairão, Portugal.*

Giulio Cuccodoro *Muséum d'Histoire naturelle, Geneva, Switzerland.*

Felipe Franco Curcio *Universidade Federal de Mato Grosso, Cuiabá, Brazil.*

Cédric d'Udekem d'Acoz *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*

Guillermo D'Elía *Universidad Austral de Chile, Valdivia, Chile.*

Cyrille D'Haese *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Indraneil Das *University of Malaysia, Sarawak, Malaysia.*

Aléssio Datovo *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*

Aniruddha Datta-Roy *Indian Institute of Science, Bangalore, India.*

Patrick David *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

John G. Day *Scottish Association for Marine Science, Oban, UK.*

Juan D. Daza *Sam Houston State University, Huntsville, USA.*

Luc Janssens de Bisthoven *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*

Ignacio Jose de la Riva de la Viña *Museo Nacional de Ciencias Naturales, Madrid, Spain.*

Christian de Muizon *CR2P, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Mario de Pinna *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*

Vítor de Q. Piacentini *Academy of Natural Sciences of Drexel University, Philadelphia, USA.*

Rafael O. de Sá *University of Richmond, Richmond, USA.*

Mario de Vivo *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*

Jan Decher *Zoologisches Forschungsmuseum A. Koenig, Bonn, Germany.*

Wouter Dekoninck *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*

Jacques H. C. Delabie *Centro de Pesquisas do Cacau, Itabuna, Brazil.*

Massimo Delfino *Università di Torino, Turin, Italy.*

Giovanni B. Delmastro *Museo Civico di Storia Naturale, Carmagnola, Italy.*

Thibaut Delsinne *Société d'Histoire Naturelle Alcide-d'Orbigny, Aubière, France.*

Christiane Denys *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Wolfgang Denzer *Wolfden Scientific Consulting, Murcia, Spain.*

Laure Desutter-Grandcolas *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Kaushik Deuti *Zoological Survey of India, Kolkata, India.*

Thierry Deuve de Resbecq *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Fabio Di Dario *Universidade Federal do Rio de Janeiro, Macaé, Brazil.*

Vladimir Dinets *University of Tennessee, Knoxville, USA.*

Carlos DoNascimento *Instituto Humboldt, Villa de Leyva, Colombia.*

David A. Donoso *Escuela Politécnica Nacional, Quito, Ecuador.*

Giuliano Doria *Museo Civico di Storia Naturale, Genova, Italy.*

Robert C. Drewes *California Academy of Sciences, San Francisco, USA.*

Eric Drouet *Gap, France.*

Marcelo Duarte *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*

Marie-Claude Durette-Desset *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

François Dusoulier *Muséum départemental d'Histoire naturelle du Var, Toulon, France.*

Sushil Kumar Dutta *Nature Environment & Wildlife Society, Angul, India.*

Michael S. Engel *University of Kansas, Lawrence, USA.*

Mark Epstein *Ewing, USA.*

Moisés Escalona *Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil.*

Jacob A. Esselstyn *Museum of Natural Science, Louisiana State University, Baton Rouge, USA.*

Koshiro Eto *Kyoto University, Kyoto, Japan.*

Julián Faivovich *Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"-CONICET, Buenos Aires, Argentina.*

Rafaela Lopes Falaschi *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*

Zachary H. Falin *University of Kansas, Lawrence, USA.*

Eduardo I. Faundez *North Dakota State University, Fargo, USA.*

Anderson Feijó *Universidade Federal da Paraíba, João Pessoa, Brazil.*

Rodrigo M. Feitosa *Universidade Federal do Paraná, Curitiba, Brazil.*

Daniel Silva Fernandes *Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil.*

Martin Fikáček *Natural History Museum - Národní Museum, Prague, Czech Republic.*

Brian L. Fisher *California Academy of Sciences, San Francisco, USA.*

Moira J. FitzPatrick *Natural History Museum of Zimbabwe, Bulawayo, Zimbabwe.*

Dimitri Forero *Pontificia Universidad Javeriana, Bogota, Colombia.*

Ismael Franz *Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.*

Hendrik Freitag *Ateneo de Manila University, Quezon City, Philippines.*

Thierry Frétey *RACINE, Saint-Maugan, France.*

Uwe Fritz *Senckenberg Naturhistorische Sammlungen, Dresden, Germany.*

Cyril Gallut *ISYEB, Université Pierre et Marie Curie, Sorbonne Universités Paris, France.*

Shan Gao *Ocean University of China, Qingdao, China.*

Guilherme S. T. Garbino *Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.*

Bolívar R. Garcete-Barrett *Museo Nacional de Historia Natural del Paraguay, San Lorenzo, Paraguay.*

Luis García-Prieto *Universidad Nacional Autónoma de México, Ciudad de México, Mexico.*

Franger J. García *Universidad de Carabobo, Valencia, Venezuela.*

Paulo C. A. Garcia *Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.*

Alfred L. Gardner *United States Geological Survey, Washington DC, USA.*

Scott Lyell Gardner *University of Nebraska, Lincoln, USA.*

Romain Garrouste *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Matthias F. Geiger *Zoologisches Forschungsmuseum A. Koenig, Bonn, Germany.*

Thomas C. Giarla *Siena College, Loudonville, USA.*

Varad Giri *National Centre for Biological Sciences, Bengaluru, India.*

Matthias Glaubrecht *CENAK-Centrum für Naturkunde, Hamburg, Germany.*

Robert C. Glotzhober *Ohio History Connection, Columbus, Ohio, USA.*

Fabio S. P. Godoi *Universidade Federal do Amazonas, Manaus, Brazil.*

Serge Gofas *Universidad de Málaga, Málaga, Spain.*

Pablo R. Gonçalves *Universidade Federal do Rio de Janeiro, Macaé, Brazil.*

Jun Gong *Chinese Academy of Sciences, Shandong, China.*

Victor H. Gonzalez *University of Kansas, Lawrence, USA.*

José Antonio González-Oreja *Benemérita Universidad Autónoma de Puebla, Puebla, México.*

Edmundo González-Santillán *Center for Research and Advanced Studies of the National Polytechnic Institute, Irapuato, Mexico.*

Enrique González-Soriano *Universidad Nacional Autónoma de México, Ciudad de México, Mexico.*

Steven M. Goodman *Field Museum of Natural History, Chicago USA.*

Philippe Grandcolas *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Lance Grande *Field Museum of Natural History, Chicago USA.*

Eli Greenbaum *University of Texas at El Paso, El Paso USA.*

Renato Gregorin *Universidade Federal de Lavras, Lavras, Brazil.*

Heinz Grillitsch *Natural History Museum, Vienna, Austria.*
Larry Lee Grismer *La Sierra University, Riverside, USA.*
Patrick Grootaert *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*
Stéphane Grosjean *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
Fabio M. Guarino *Università degli Studi di Napoli Federico II, Naples, Italy.*
Juan M. Guayasamin *Universidad San Francisco de Quito, Quito, Ecuador.*
Benoit Guénard *University of Hong Kong, Hong Kong.*
Lázaro Guevara *City University of New York, New York, USA.*
Marcus Guidoti *MECADEV, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
Devanshu Gupta *Zoological Survey of India, Kolkata, India.*
Václav Gvoždík *Institute of Vertebrate Biology, CAS, Brno, Czech Republic*
Célio F. B. Haddad *Universidade Estadual Paulista, Rio Claro, Brazil.*
Jakob Hallermann *CENAK-Centrum für Naturkunde, Hamburg, Germany.*
Alexandre Hassanin *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
Axel Hausmann *Zoologische Staatssammlung München, Munich, Germany.*
Lawrence R. Heaney *Field Museum of Natural History, Chicago USA.*
Matthew P. Heinicke *University of Michigan-Dearborn, Dearborn, USA.*
Kristofer M. Helgen *National Museum of Natural History, Smithsonian Institution, Washington DC, USA.*
Klaus Henle *Helmholtz Centre for Environmental Research, Leipzig, Germany.*
Alice Hirschmann *Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.*
Michael W. Holmes *Santa Rosa Junior College, Santa Rosa, USA.*
Maria Holyńska *Muzeum i Instytut Zoologii Polskiej Akademii Nauk, Warsaw, Poland.*
Roman Holyński *Milanówek, Poland.*
Gustavo Hormiga *George Washington University, Washington DC, USA.*
Bernhard A. Huber *Zoologisches Forschungsmuseum A. Koenig, Bonn, Germany.*
Jean-Pierre Hugot *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
Rainer Hutterer *Zoologisches Forschungsmuseum A. Koenig, Bonn, Germany.*
Djoko Iskandar *Institut Teknologi Bandung, Bandung, Indonesia.*
John B. Iverson *Earlham College, Richmond, USA.*
Peter Jäger *Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.*
Ronald Janssen *Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.*
Fernando Jerep *Universidade Estadual de Londrina, Londrina, Brazil.*
Rudy Jocqué *Royal Museum for Central Africa, Tervuren, Belgium.*
Karl-Heinz Jungfer *University of Koblenz-Landau, Koblenz, Germany.*
Jean-Lou Justine *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
Rachunliu G. Kamei *The Natural History Museum, London, UK.*
Marcin Jan Kamiński *Muzeum i Instytut Zoologii Polskiej Akademii Nauk, Warsaw, Poland.*
Michael Karner *Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.*
Teresa Kearney *Ditsong National Museum of Natural History, Pretoria, South Africa.*
Rahul Khot *Bombay Natural History Society, Mumbai, India.*
Max Kieckbusch *Philipps-Universität Marburg, Marburg, Germany.*
Jörn Köhler *Hessisches Landesmuseum, Darmstadt, Germany.*
Klaus-Peter Koepfli *Smithsonian Conservation Biology Institute, Washington DC, USA.*
Előd Kondorosy *University of Pannonia, Keszthely, Hungary.*
Lars Krogmann *Staatliches Museum für Naturkunde, Stuttgart, Germany.*
Tiago Kütter Krolow *Universidade Federal de Tocantins - UFT, Porto Nacional, Tocantins Brazil.*
Martin Krüger *Ditsong National Museum of Natural History, Pretoria, South Africa.*
Christoph Kucharzewski *Museum für Naturkunde, Berlin, Germany.*
Sven O. Kullander *Naturhistoriska riksmuseet, Stockholm, Sweden.*
Santosh Kumar *Università di Camerino, Camerino, Italy.*
Alexander Kupfer *Staatliches Museum für Naturkunde, Stuttgart, Germany.*
Mitsuru Kuramoto *Hikarigaoka, Munakata, Japan.*
Olavi Kurina *Institute of Agricultural and Environmental Sciences, Tartu, Estonia.*
Adriano Kury *Museu Nacional, Rio de Janeiro, Brazil.*

Sebastian Kvist *Royal Ontario Museum, Toronto, Canada.*
Enrique La Marca *Universidad de Los Andes, Merida, Venezuela.*
Antonietta La Terza *Università di Camerino, Camerino, Italy.*
Richard LaVal *The Bat Jungle, Monteverde, Costa Rica.*
Thomas E. Lacher *Texas A&M University, College Station, USA.*
Carlos J. E. Lamas *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*
Max R. Lambert *Yale University, New Haven, USA.*
Bernard Landry *Muséum d'Histoire naturelle, Geneva, Switzerland.*
Francisco Langeani *Universidade Estadual Paulista, Sao Jose do Rio Preto, Brazil.*
José A. Langone *Museo Nacional de Historia Natural, Montevideo, Uruguay.*
John E. Lattke *Universidade Federal do Paraná, Curitiba, Brazil.*
Esteban O. Lavilla *Fundación Miguel Lillo-CONICET, Tucumán, Argentina.*
Twan Leenders *Roger Tory Peterson Institute of Natural History, Jamestown, USA.*
David C. Lees *The Natural History Museum, London, UK.*
Yuri L. R. Leite *Universidade Federal do Espírito Santo, Vitória, Brasil.*
Thomas Lehmann *Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.*
Marcos Gonçalves Lhano *Universidade Federal do Recôncavo da Bahia, Cruz das Almas, Brazil.*
Burton K. Lim *Royal Ontario Museum, Toronto, Canada.*
Xiaofeng Lin *South China Normal University, Guangzhou, 510631, China.*
Ivan Löbl *Muséum d'Histoire naturelle, Geneva, Switzerland.*
Carlos A. S. de Lucena *Museu de Ciências e Tecnologia PUCRS, Porto Alegre, Brazil.*
Zilda Margarete S. de Lucena *Pontificia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil.*
Paulo Lucinda *Universidade Federal do Tocantins, Porto Nacional, Brazil.*
Nathan K. Lujan *University of Toronto, Scarborough, Canada.*
Pierangelo Luporini *Università di Camerino, Camerino, Italy.*
David R. Luz *Federal University of Paraná, Curitiba, Brazil.*
John D. Lynch *Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá, Colombia.*
Leonardo Ferreira Machado *Universidade de Brasília, Brasília, Brazil.*
Stephen Mahony *The Natural History Museum, London, UK.*
Luiz R. Malabarba *Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.*
Marivene Manuel-Santos *National Museum of Philippines, Manila, Philippines.*
Jader Marinho-Filho *Universidade de Brasília, Brasília, Brazil.*
Miguel Â. Marini *Universidade de Brasília, Brasília, Brazil.*
Antonio Carlos Marques *Universidade de São Paulo, São Paulo, Brazil.*
Mariana P. Marques *Museu Nacional de História Natural e da Ciência, Lisboa, Portugal.*
Octávio Mateus *NOVA University of Lisbon, Caparica, Portugal.*
Masafumi Matsui *Kyoto University, Kyoto, Japan.*
Tomáš Mazuch *Dráteč, Czech Republic.*
James McCranie *Miami, Florida, USA.*
Ryan C. McKellar *Royal Saskatchewan Museum, Regina, Canada.*
Caleb D. McMahan *Field Museum of Natural History, Chicago USA.*
Sven Mecke *Philippis-Universität Marburg, Marburg, Germany.*
Karin Meißner *Deutsches Zentrum für Marine Biodiversitätsforschung, Hamburg, Germany.*
María A. Mendoza-Becerril *Centro de Investigaciones Biológicas del Noroeste, La Paz, Mexico.*
Carlos A. Mendoza-Palmero *Universidad Nacional Autónoma de México, Ciudad de México, Mexico.*
Stefan Merker *Staatliches Museum für Naturkunde, Stuttgart, Germany.*
Marcello Mezzasalma *Università degli Studi di Napoli Federico II, Naples, Italy.*
John Mark Midgley *Albany Museum, Grahamstown, South Africa.*
Jeremy Miller *Naturalis Biodiversity Center, Leiden, The Netherlands.*
Matthew J. Miller *Sam Noble Museum, Norman, USA.*
Michael Maia Mincarone *Universidade Federal do Rio de Janeiro, Macaé, Brazil.*
Joël Minet *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
Aurélien Miralles *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
Thaís P. Miranda *Universidade de São Paulo, São Paulo, Brazil.*

Alain Didier Missoup *University of Douala, Douala, Cameroon.*

David Modrý *Veterinární a Farmaceutická Univerzita Brno, Brno, Czech Republic.*

Jesús Molinari *Universidad de Los Andes, Merida, Venezuela.*

Ara Monadjem *University of Swaziland, Kwaluseni, Swaziland.*

Olivier Montreuil *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Ricardo Moratelli *Fundação Oswaldo Cruz, Rio de Janeiro, Brazil.*

Cristiano Rangel Moreira *Museu Nacional, Rio de Janeiro, Brazil.*

Felipe F. F. Moreira *Fundação Oswaldo Cruz, Rio de Janeiro, Brazil.*

Cécile Mourer-Chauviré *Université Claude Bernard, Lyon, France.*

Pablo Ricardo Mulieri *Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"-CONICET, Buenos Aires, Argentina.*

Thomas A. Munroe *Smithsonian Institution, Washington DC, USA.*

Shun-Ichiro Naomi *Natural History Museum and Institute, Chiba, Japan.*

Fabio Nascimento *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*

Wolfgang A. Nässig *Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.*

Lassad Neifar *Faculté des Sciences de Sfax, Sfax, Tunisia.*

Andre L. Netto-Ferreira *Museu Paraense Emilio Goeldi, Belém, Brazil.*

Aidin Niamir *Senckenberg Biodiversität und Klima Forschungszentrums, Frankfurt, Germany.*

Stuart V. Nielsen *Marquette University, Milwaukee, USA.*

Silvio S. Nihei *Universidade de São Paulo, São Paulo, Brazil.*

Annamaria Nistri *Museo di Storia Naturale dell'Università di Firenze, Florence, Italy.*

Alejandro Ocegüera-Figueroa *Universidad Nacional Autónoma de México, Ciudad de México, Mexico.*

Gaetano Odierna *Università degli Studi di Napoli Federico II, Naples, Italy.*

Annemarie Ohler *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*

Andres A. Ojanguren-Affilastro *Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"-CONICET, Buenos Aires, Argentina.*

Favízia Freitas de Oliveira *Universidade Federal da Bahia, Salvador, Brazil.*

Marcio Luiz de Oliveira *Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil.*

Otto Müller Patrão de Oliveira *Universidade Federal do ABC, São Bernardo, Brazil.*

Sarah Siqueira Oliveira *Universidade Federal de Goiás, Goiânia, Brazil.*

Link E. Olson *University of Alaska Museum, Fairbanks, USA.*

Geoffrey O. Ong'ondo *Egerton University, Egerton, Kenya.*

Nikolai Orlov *Zoological Institute, Russian Academy of Sciences, St.Petersburg, Russia.*

Claudia Patricia Ornelas-García *Universidad Autónoma de México, Ciudad de México, Mexico.*

Hernan Ortega *Museo de Historia Natural, Lima, Perú.*

Mauricio Ortega-Andrade *IKIAM Universidad Regional Amazónica, Tena, Ecuador.*

Hidetoshi Ota *University of Hyogo, Sanda, Japan.*

Antoine Pariselle *Institut de Recherche pour le Développement, Paris, France.*

Paulo Passos *Museu Nacional, Rio de Janeiro, Brazil.*

Murilo N. L. Pastana *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*

Bruce D. Patterson *Field Museum of Natural History, Chicago USA.*

Luciano D. Patitucci *Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"-CONICET, Buenos Aires, Argentina.*

James L. Patton *Museum of Vertebrate Zoology, Berkeley, USA.*

Ana C. Pavan *Universidade de São Paulo, Piracicaba, Brazil.*

Silvia E. Pavan *American Museum of Natural History, New York, USA.*

Marco Pavia *Università di Torino, Turin, Italy.*

Pedro L. V. Peloso *Museu Paraense Emilio Goeldi, Belém, Brazil.*

Alexander Pelzer *Niedersächsischer Landesbetrieb für Wasserwirtschaft, Küsten und Naturschutz, Hannover, Germany.*

Martín O. Pereyra *Museo Argentino de Ciencias Naturales "Bernardino Rivadavia" - CONICET, Buenos Aires, Argentina.*

Abel Perez-Gonzalez *Museo Argentino de Ciencias Naturales "Bernardino Rivadavia" - CONICET, Buenos Aires, Argentina.*

Blanca Pérez-Luz *Universidad Complutense de Madrid, Madrid, Spain.*

Cristian Hernan Fulvio Pérez *Centro Nacional Patagónico-CONICET, Puerto Madryn, Argentina.*

Julian Kerbis Peterhans *College of Professional Studies, Roosevelt University, Chicago, USA.*

A. Townsend Peterson *University of Kansas, Lawrence, USA.*

Julien Pétilion *Université de Rennes 1, Rennes, France.*

Thomas Keith Philips *Western Kentucky University, Bowling Green, USA.*

Orfeo Picariello *Università degli Studi di Napoli Federico II, Naples, Italy.*

Marcio R. Pie *Universidade Federal do Paraná, Curitiba, Brazil.*

Tiago G. Pikart *Universidade Federal do Acre, Rio Branco, Acre, Brazil.*

Ronald H. Pine *University of Kansas, Lawrence, USA.*

Ulisses Pinheiro *Universidade Federal de Pernambuco, Recife, Brazil.*

Luiz Carlos Pinho *Universidade Federal de Santa Catarina, Florianópolis, Brazil.*

Ângelo P. Pinto *Museu Nacional, Rio de Janeiro, Brazil.*

Leonora Pires Costa *Universidade Federal do Espírito Santo, Vitória, Brazil.*

Roberto Poggi *Museo Civico di Storia Naturale, Genova, Italy.*

José P. Pombal Jr. *Museu Nacional, Rio de Janeiro, Brazil.*

Mrugank Prabhu *Bombay Natural History Society, Mumbai, India.*

Elizabeth Prendini *American Museum of Natural History, New York, USA.*

Lorenzo Prendini *American Museum of Natural History, New York, USA.*

Jasmine Purushothaman *Zoological Survey of India, Kolkata, India.*

Robert Alexander Pyron *George Washington University, Washington DC, USA.*

Pablo Quintela-Alonso *Universidad Complutense de Madrid, Madrid, Spain.*

Andres Sebastian Quinteros *Instituto de Bio y Geociencias del Noroeste Argentino, Salta, Argentina.*

Marcial Quiroga-Carmona *Instituto Venezolano de Investigaciones Científicas, Caracas, Venezuela.*

Wolfgang Rabitsch *Umweltbundesamt, Vienna, Austria.*

Jean Raffaëlli *Penclen, Plumelec, France.*

Jean-Claude Rage *Centre de Recherches sur la Paléobiodiversité et les Paléoenvironnements, CNRS-MNH-UPMC, Paris, France.*

Hossein Rajaei *Staatliches Museum für Naturkunde, Stuttgart, Germany.*

Martín J. Ramírez *Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”-CONICET, Buenos Aires, Argentina.*

Marcos A. Raposo *Museu Nacional, Rio de Janeiro, Brazil.*

Lucia H. Rapp Py-Daniel *Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil.*

Jean-Yves Rasplus *Centre de Biologie pour la Gestion des Populations-INRA, Montferrier-sur-Lez, France.*

Brett C. Ratcliffe *University of Nebraska, Lincoln, USA.*

Sushma Reddy *Loyola University Chicago, Chicago, USA.*

Roberto E. Reis *Pontificia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil.*

James V. Remsen, Jr. *Museum of Natural Science, Louisiana State University, Baton Rouge, USA.*

Leigh R. Richards *Durban Natural Science Museum, Durban, South Africa.*

Ira Richling *Staatliches Museum für Naturkunde, Stuttgart, Germany.*

Tony Robillard *ISYEB, Muséum national d’Histoire naturelle, Sorbonne Universités, Paris, France.*

Marcelo Salles Rocha *Universidade do Estado do Amazonas, Manaus, Brazil.*

Rosana Moreira Rocha *Universidade Federal do Paraná, Curitiba, Brazil.*

Dennis Rödder *Zoologisches Forschungsmuseum A. Koenig, Bonn, Germany.*

Mark-Oliver Rödel *Museum für Naturkunde, Berlin, Germany.*

Fernando P. Rodrigues *Universidade de Brasília, Brasília, Brazil.*

Estefania Rodriguez *American Museum of Natural History, New York, USA.*

Duke S. Rogers *Brigham Young University, Provo, USA.*

Fernando J. M. Rojas-Runjaic *Museo de Historia Natural La Salle, Caracas, Venezuela.*

Beate Röhl *Stiftung Tierärztliche Hochschule Hannover, Hannover, Germany.*

Alfred L. Rosenberger *City University of New York, New York, USA.*

Jodi Rowley *Australian Museum, Sydney, Australia.*

André Silva Roza *Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil.*

Manuel Ruedi *Muséum d’Histoire naturelle, Geneva, Switzerland.*

Jorge Salazar-Bravo *Texas Tech University, Lubbock, USA.*

Norma J. Salcedo *Francis Marion University, Florence, USA.*
Yves Samyn *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*
Sharlene E. Santana *University of Washington, Seattle, USA.*
Luciana Santoferrara *University of Connecticut, Groton, USA.*
Bernardo F. Santos *American Museum of Natural History, New York, USA.*
Charles Morphy D. Santos *Universidade Federal do ABC, Santo André, Brazil.*
Jean Carlos Santos *Universidade Federal de Uberlândia, Uberlândia, Brazil.*
Marcos Pérsio Dantas Santos *Universidade Federal do Para, Belém, Brazil.*
Eric J. Sargis *Yale Peabody Museum, New Haven, USA.*
Walter E. Schargel *University of Texas at Arlington, Arlington, USA.*
Beat Schätti *formerly Muséum d'Histoire naturelle, Geneva, Switzerland.*
Mark D. Scherz *Zoologische Staatssammlung München, Munich, Germany.*
Birgit C. Schlick-Steiner *Institute of Ecology, University of Innsbruck, Innsbruck, Austria.*
Ray C. Schmidt *Smithsonian Institution, Washington DC, USA.*
Thomas Schmitt *Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany.*
Richard Schodde *National Research Collections, CSIRO, Australia, Canberra, Australia.*
Colin S. Schoeman *University of Venda, Thohoyandou, South Africa.*
Silke Schweiger *Naturhistorisches Museum, Vienna, Austria.*
Cristiano F. Schwertner *Universidade Federal de São Paulo, Diadema, Brazil.*
Ernest C. J. Seamark *University of Pretoria, Pretoria, South Africa.*
Thiago B. F. Semedo *Universidade Federal de Mato Grosso, Cuiabá, Brazil.*
Mann Kyoon Shin *University of Ulsan, Ulsan, Korea.*
Cameron D. Siler *Sam Noble Museum, Norman, USA.*
Luís Fábio Silveira *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*
W. Brian Simison *California Academy of Sciences, San Francisco, USA.*
Marcello Simões *Universidade Estadual de São Paulo, Botucatu, Brazil.*
Jack W. Sites *Brigham Young University, Provo, USA.*
Brian Tilston Smith *American Museum of Natural History, New York, USA.*
Krister T. Smith *Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.*
Weibo Song *Institute of Marine Biodiversity and Evolution, Ocean University of China, Qingdao, China.*
Adeline Soulier-Perkins *ISYEB, Muséum national d'Histoire naturelle, Sorbonne Universités, Paris, France.*
Leandro M. Sousa *Universidade Federal do Pará, Altamira, Brazil.*
John S. Sparks *American Museum of Natural History, New York, USA.*
Sérgio N. Stampar *Universidade Estadual Paulista, Assis, Brazil.*
Florian M. Steiner *Institute of Ecology, University of Innsbruck, Innsbruck, Austria.*
Jean-Sébastien Steyer *Centre de Recherches sur la Paléobiodiversité et les Paléoenvironnements, CNRS-MNHN-UPMC, Paris, France.*
Melanie L. J. Stiassny *American Museum of Natural History, New York, USA.*
Thorsten Stoeck *Technische Universität Kaiserslautern, Kaiserslautern, Germany.*
Renata Stopiglia *Universidade de São Paulo, Ribeirão Preto, Brazil.*
Jeffrey W. Streicher *The Natural History Museum, London, UK.*
Marcelo J. Sturaro *Museu Paraense Emilio Goeldi, Belém, Brazil.*
Pavel Stys *Department of Zoology, Charles University, Prague, Czech Republic.*
Lindsey Swierk *Yale University, New Haven, USA.*
Andreas Taeger *Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany.*
Daniela M. Takiya *Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil.*
Donald C. Taphorn *Universidad Nacional Experimental de los Llanos Occidentales Ezequiel Zamora, Guanare, Venezuela.*
Marcos Tavares *Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.*
Valeria da C. Tavares *Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.*
Peter John Taylor *University of Venda, Thohoyandou, South Africa.*
Jose G. Tello *Long Island University, Brooklyn, USA.*
Pablo Teta *Museo Argentino de Ciencias Naturales "Bernardino Rivadavia" - CONICET, Buenos Aires, Argentina.*
Frank Tillack *Museum für Naturkunde, Berlin, Germany.*

Robert M. Timm *University of Kansas, Lawrence, USA.*
Tim Tokaryk *Royal Saskatchewan Museum, Regina, Canada.*
Atsushi Tominaga *University of the Ryukyus, Okinawa, Japan.*
João Filipe Riva Tonini *George Washington University, Washington DC, USA.*
Luke Tornabene *National Museum of Natural History, Smithsonian Institution, Washington DC, USA.*
Omar Torres-Carvajal *Museo de Zoología, Escuela de Ciencias Biológicas, Pontificia Universidad Católica del Ecuador, Quito, Ecuador.*
Josiah Townsend *Indiana University of Pennsylvania, Indiana, USA.*
Jean-François Trape *IRD, Dakar, Sénégal.*
Miguel Trefaut Rodrigues *Universidade de São Paulo, São Paulo, Brazil.*
Robert Trusch *State Museum of Natural History Karlsruhe, Karlsruhe, Germany.*
Emanuel Tschopp *Università di Torino, Turin, Italy.*
Dieter Uhl *Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.*
Nathan S. Upham *Yale University, New Haven, USA.*
Jean-Pierre Vacher *Université Toulouse III - Paul Sabatier, Toulouse, France.*
Stefano Valdesalici *Viano, Italy.*
Bert Van Bocxlaer *Ghent University, Ghent, Belgium.*
Victor Van Cakenberghe *University of Antwerp, Antwerp, Belgium.*
Thomas van de Kamp *Karlsruhe Institut für Technologie, Karlsruhe, Germany.*
Isabella Van de Velde *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*
Didier Van den Spiegel *Royal Museum for Central Africa, Tervuren, Belgium.*
Maarten P. M. Vanhove *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*
Karthikeyan Vasudevan *Centre for Cellular & Molecular Biology, Hyderabad, India.*
Deepak Veerappan *Indian Institute of Science, Bangalore, India.*
Paúl M. Velazco *American Museum of Natural History, New York, USA.*
Vanessa K. Verdade *Universidade Federal do ABC, Santo André, Brazil.*
Erik Verheyen *Royal Belgian Institute for Natural Sciences, Brussels, Belgium.*
Leandro M. Vieira *Universidade Federal de Pernambuco, Recife, Brazil.*
Pedro F. Victoriano *Universidad de Concepción, Concepción, Chile.*
Laurie J. Vitt *Sam Noble Museum, Norman, USA.*
Philipp Wagner *Zoologische Staatssammlung München, Munich, Germany.*
Gregory J. Watkins-Colwell *Yale Peabody Museum of Natural History, New Haven, USA.*
Thomas Weisse *University of Innsbruck, Mondsee, Austria.*
Fernanda P. Werneck *Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil.*
Ward C. Wheeler *American Museum of Natural History, New York, USA.*
Don E. Wilson *National Museum of Natural History, Smithsonian Institution, Washington DC, USA.*
Katharina C. Wollenberg Valero *Bethune-Cookman University, Daytona Beach, USA.*
Perry Lee Wood, Jr. *Brigham Young University, Provo, USA.*
Neal Woodman *National Museum of Natural History, Smithsonian Institution, Washington DC, USA.*
Hernández-Díaz Yoalli Quetzalli *Universidad Nacional Autónoma de México, Ciudad de México, Mexico.*
Natsuhiko Yoshikawa *National Museum of Nature and Science, Tokyo, Japan.*
Hussam Zaher *Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil.*
Thomas Ziegler *Zoologischer Garten Köln, Cologne, Germany.*
Jan Zima *Institute of Vertebrate Biology, CAS, Brno, Czech Republic*
Robert M. Zink *University of Nebraska, Lincoln, USA.*
George Zug *National Museum of Natural History, Smithsonian Institution, Washington DC, USA.*