

LITERATUR

- Adam, D. 2022. How far will global population rise. – *Nature*, 597: 493–494.
- Almond, R.E.A., Grooten, M. & Petersen, T. 2020. *Living Planet Report 2020*. World Wide Fund for Nature International, Gland, Switzerland.
- Amiriaux, R., Yurkowski, D.J., Archambault, P., Pierrejean, M. & Mundy, C. J. 2023. Top predator sea stars are the benthic equivalent to polar bears of the pelagic realm. – *Proceedings of the National Academy of Sciences*, 120(1): e2216701120.
- Andermann, T., Faurby, S., Turvey, S. T., Antonelli, A. & Silvestro, D. 2020. The past and future human impact on mammalian diversity. – *Science Advances*, 6: eabb2313.
- Anderson, S. 2011. Cascading effects of bird functional extinction reduce pollination and plant density. – *Science*, 331: 1068–1071.
- Appeltans, W. et al. 2012. The magnitude of global marine species diversity. – *Current Biology*, 22: 2189–2202.
- Arlinghaus, R., Cooke, S.J. 2005. Global impact of recreational fisheries. – *Science*, 307: 1561–1563.
- Asbridge, Thomas 2010. *Die Kreuzzüge*. Klett-Cotta, Stuttgart.
- Bae, C.J. et al. 2017. On the origin of modern humans: Asian perspectives. – *Science*, 358: 1269; eaai9067.
- Baker, C.S., Clapham, P.J. 2004. Modelling the past and future of whales and whaling. – *Trends in Ecology and Evolution*, 19(7): 365–371.

- Bar-On, Y.M. et al. 2018. The biomass distribution on Earth. – *Proceedings of the National Academy of Sciences*, 115(25): 6506–6511.
- Barlow, J. et al. 2018. The future of hyperdiverse tropical ecosystems. – *Nature*, 559: 517–526.
- Barnosky, A.D. et al. 2011. Has the Earth's sixth mass extinction already arrived? – *Nature*, 471: 51–57.
- Barnosky, A.D. et al. 2012. Approaching a state shift in Earth's biosphere. – *Nature*, 486: 52–58.
- Barrett, J.H. et al. 2004. The origins of intensive marine fishing in medieval Europe: The English evidence. – *Proceedings of the Royal Society of London B* 271: 2417–2421.
- Bartlett, Robert 1993. *The making of Europe. Conquest, colonization and cultural change* (Deutsch. *Die Geburt Europas aus dem Geist der Gewalt*. Droemer Knaur, München 1998).
- Bauer, H. et al. 2015. Lion (*Panthera leo*) populations are declining rapidly across Africa, except in intensively managed areas. – *Proceedings of the National Academy of Sciences*, 112(48): 14894–14899.
- Bauer, H.-G., Heine, G., Schmitz, D., Segelbacher, G. & Werner, S. 2019. Starke Bestandsveränderungen der Brutvogelwelt des Bodenseegebietes. Ergebnisse aus vier flächendeckenden Brutvogelkartierungen in drei Jahrzehnten. – *Die Vogelwelt*, 139: 3–29.
- Beck, Valentin 2016. *Eine Theorie der globalen Verantwortung. Was wir Menschen in extremer Armut schulden*. Suhrkamp, Berlin.
- Benton, Michael J. 2003. *When life nearly died. The greatest extinction of all times*. Thames & Hudson, London.
- Berthold, Peter 2017. *Unsere Vögel. Warum wir sie brauchen und wie wir sie schützen*. Ullstein, Berlin.
- Bertola, L.D., et al. 2011. Genetic diversity, evolutionary history and implications for conservation of the lion (*Panthera leo*) in West and Central Africa. – *Journal of Biogeography*, 38(7): 1356–1367.
- Berzaghi, F., Bretagnolle, F., Durand-Bessart, C., Blake, S. 2023. Megaherbivores modify forest structure and increase carbon stocks through multiple pathways. – *Proceedings of the National Academy of Sciences*, 120(5): e2201832120.
- Bettex, Albert 1965. *Die Entdeckung der Natur*. Droemer Knaur, München.
- Bianchi, C.N. et al. 2012. Mediterranean Sea biodiversity between

- the legacy from the past and a future of change. – In: Stambler, Noga (ed.), *Life in the Mediterranean Sea: a look at habitat changes*, 1–55. Nova Science Publishers, New York.
- Biesmeijer, J.C. et al. 2006. Parallel declines in pollinators and insect-pollinated plants in Britain and the Netherlands. – *Science*, 313: 351–354.
- BirdLife International 2013. *Saving the world's most threatened birds: the BirdLife preventing extinctions programme*. BirdLife International, Cambridge.
- Birg, Herwig 1996. *Die Weltbevölkerung. Dynamik und Gefahren*. (2. aktualisierte Auflage 2004). C.H. Beck, München.
- Birg, Herwig 2005. *Die ausgefallene Generation. Was die Demographie über unsere Zukunft sagt*. C.H. Beck, München.
- Birkhead, Tim 2008. *The wisdom of birds. An illustrated history of ornithology*. Bloomsbury, London.
- Birkhead, Tim et al. 2014. *Ten thousand birds. Ornithology since Darwin*. Princeton University Press, Princeton.
- Bloom, D.E. 2011. 7 billion and counting. – *Science*, 333: 562–567.
- Bocquet-Appel, J.-P. 2011a. When the world's population took off: The springboard of the Neolithic demographic transition. – *Science*, 333: 560–561.
- Bocquet-Appel, J.-P. 2011b. The agricultural demographic transition during and after the agriculture inventions. – *Current Anthropology*, 52(S4): 497–510.
- Bolster, W. Jeffrey 2012. *The mortal sea. Fishing the Atlantic in the age of sail*. Harvard University Press, Cambridge, Mass.
- Bommert, Wilfried 2009. *Kein Brot für die Welt. Die Zukunft der Welt-ernährung*. Riemann Verlag, München.
- Bourne, Joel K. 2015. *The end of plenty. The race to feed a crowded world*. W. W. Norton, New York, London.
- Bowler, D. et al. 2019. Long-term declines of European insectivorous bird populations and potential causes. – *Conservation Biology*, 33(5): 1120–1130.
- Bräuer, G. 1994. How different are Asian and African *Homo erectus*? – *Courier Forschungs-Institut Senckenberg*, 171: 301–318.
- Bräuer, G. 2012. Middle Pleistocene diversity in Africa and the origin of modern humans. – In: Hublin, Jean-Jacques, McPherron, Shan-

- non P. (eds.), *Modern Origins: A North African perspective*. Vertebrate Paleobiology and Paleoanthropology, Springer, Dordrecht.
- Bräuer, G., Mbua, E. 1992. *Homo erectus* features used in cladistics and their variability in Asian and African hominids. – *Journal of Human Evolution*, 22: 79–108.
- Brandl, S.J. et al. 2019. Demographic dynamics of the smallest marine vertebrates fuel coral-reef ecosystem functioning. – *Science*, 364: 1189–1192.
- Brehm, Alfred Edmund 1954. *Brehms Tierleben. Zwölfter Band: Lurche, Fische*. Herausgegeben von Adolf Meyer-Abich, nach der zweiten und letzten Originalausgabe. Standard-Verlag, Hamburg.
- Breising, Karsten 2017. *Das Mysterium der Tiere. Was sie denken, was sie fühlen*. Aufbau Verlag, Berlin.
- Breyer, Francis 2016. *Punt: Die Suche nach dem ›Gottesland‹*. Brill, Leiden, Boden.
- Brown, J.H. 2014. Why are there so many species in the tropics? – *Journal of Biogeography*, 41: 8–22.
- Brühl, C.A., Bakanov, N., Köthe, S. et al. 2021. Direct pesticide exposure of insects in nature conservation areas in Germany. – *Scientific Reports*, 11: 24144.
- Brunner, Bernd 2015. *Ornithomania. Geschichte einer besonderen Leidenschaft*. Galiani, Berlin.
- Brusatte, Steve 2018. *Aufstieg und Fall der Dinosaurier. Eine neue Geschichte der Urzeitgiganten*. Piper Verlag, München.
- Burger, J. et al. 2004. Molecular phylogeny of the extinct cave lion, *Panthera leo spelea*. – *Molecular Phylogenetics and Evolution*, 30: 841–849.
- Burgess, S. 2019. Deciphering mass extinction triggers. – *Science*, 363: 815–816.
- Burns, F., Eaton, M. A., Burfield, I. J., Klvanova, A., Silarova, E., Staneva, A. & Gregory, R. D. 2021. Abundance decline in the avifauna of the European Union reveals cross-continental similarities in biodiversity change. – *Ecology and Evolution*, 11: 16647–16660.
- Butler, D. 2016. Tomorrow's world. – *Nature*, 530: 399.
- Callaway, E. 2014. Oldest-known human genom sequenced. – *Nature*, 514: 413.

- Calvo-Agudo, M. et al. 2019. Neonicotinoids in excretion product of phloem-feeding insects kill beneficial insects. – *Proceedings of the National Academy of Sciences*, 116(34): 16817–16822.
- Cardillo, M. et al. 2005. Multiple causes of high extinction risk in large mammal species. – *Science*, 309: 1239–1241.
- Carey, J. 2016. Core concept: Are we in the »Anthropocene«? – *Proceedings of the National Academy of Sciences*, 113(15): 3908–3909.
- Carotenuto, F. et al. 2016. Venturing out safely: The biogeography of *Homo erectus* dispersal out of Africa. – *Journal of Human Evolution*, 95: 1–12.
- Carson, Rachel 1962. *Silent spring*. Houghton Mifflin, Boston (Deutsch: *Der stumme Frühling*. Biederstein-Verlag, München 1962).
- Cartmill, M. 1983. Four legs good, two legs bad. – *Natural History*, 11: 65–78.
- Cassidy, E.S., West, P.C., Gerber, J.S., Foley, J.A. 2013. Redefining agricultural yields: from tonnes to people nourished per hectare. – *Environmental Research Letters*, 8: 034 015.
- Cavalli-Sforza, Luca, Cavalli-Sforza, Francesco 1994. *Verschieden und doch gleich. Ein Genetiker entzieht dem Rassismus die Grundlage*. Droemer Knauer, München.
- Ceballos, G., Ehrlich, P.R. 2018. The misunderstood sixth mass extinction. – *Science*, 360: 1080–1081.
- Ceballos, G., Ehrlich, P.R., Dirzo, R. 2017. Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines. – *Proceedings of the National Academy of Science*, 114: E6089–E6096.
- Cernansky, R. 2017. The biodiversity revolution. – *Nature*, 546: 22–24.
- Chapman, Arthur D. 2009. *Numbers of living species in Australia and the world*. Australian Biological Resources Study, Canberra.
- Cheung, W.W.L. et al. 2016. Large benefits to marine fisheries of meeting the 1.5 c global warming target. – *Science*, 354: 1591–1594.
- Cheung, W.W.L. 2018. The future of fishes and fisheries in the changing oceans. – *Journal of Fish Biology*, 92: 790–803.
- Civitello, D.J. et al. 2015. Biodiversity inhibits parasites: Broad evidence for the dilution effect. – *Proceedings of the National Academy of Sciences*, 112 (28): 8667–8671.
- Clapham, P.J., Baker, C.S. 2002. Modern whaling. – In: Perrin, W.F. et

- al. (eds.), *Encyclopedia of Marine Mammals*, pp. 1328–1332. Academic Press, New York.
- Conniff, Richard 2011. *The species seekers. Heroes, fools, and the mad pursuit of life on Earth*. W.W. Norton & Company, New York.
- Conrad, K.F. et al. 2004. Long-term population trends in widespread British moths. – *Journal of Insect Conservation*, 8: 119–136.
- Conway, Gordon 2012. *One billion hungry. Can we feed the world?* Cornell University Press, Ithaca.
- Costello, M.J., Wilson, S., Houlding, B. 2012. Predicting total global species richness using rates of species description and estimates of taxonomic effort. – *Systematic Biology*, 61(5): 871–883.
- Costello, M. J., May, R. M., Stork, N. E. 2013. Can we name Earth's species before they go extinct? – *Science*, 339: 413–416.
- Couzens, D. 2010. *Atlas of rare birds*. New Holland Publishers, London.
- Cowie, R. H., Bouchet, P., Fontaine, B. 2022. The sixth mass extinction: fact, fiction or speculation? – *Biological Reviews*, 97: 640–663.
- Cressey, D. 2015. World's whaling slaughter tallied. – *Nature*, 519: 140–141.
- Crosby, Alfred W. 1986. *Ecological imperialism. The biological expansion of Europe, 900–1900*. Cambridge University Press, Cambridge (Deutsch: *Die Früchte des weißen Mannes. Ökologischer Imperialismus 900–1900*. Campus, Frankfurt am Main 1991).
- Curry, A. 2023. Neanderthals lived in groups big enough to eat giant elephants. – *Science*, 379: 428.
- Darimont, C.T. et al. 2009. Human predators outpace other agents of trait change in the wild. – *Proceedings of the National Academy of Sciences*, 106: 952–954.
- Darimont, C.T. et al. 2015. The unique ecology of human predators. – *Science*, 349: 858–860.
- Dartnell, Lewis 2019. *Origins: How the earth made us*. Bodley Head, London.
- Darwin, Charles 1839. *Journal of researches into the geology and natural history of the various countries visited by H.M.S. Beagle*. John Murray, London (Deutsch: *Reise eines Naturforschers um die Welt*. S. Fischer, Frankfurt am Main 1962).

- Dasgupta, P.S., Ehrlich, P.R. 2013. Pervasive externalities at the population, consumption, and environment nexus. – *Science*, 340: 324–328.
- Dasgupta, Partha S. 2021. *The Economics of Biodiversity: The Dasgupta Review*. Published by the Government of the United Kingdom, London. (Online unter: www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review.)
- Daume, H. V., Herr, H., Mallison, H., Glaubrecht, M. & Kaiser, T. M. 2023. Osteo-pathological analysis provides evidence for survived historical ship strike in a Southern Hemisphere fin whale (*Balaenoptera physalus*). – *PLoS ONE*, 18(2): e0281316.
- Davies, T. et al. 2018. Popular interest in vertebrates does not reflect extinction risk and is associated with bias in conservation investment. – *PLoS ONE*, 13(9): e0203694.
- Dawkins, Richard 2006. *The god delusion*. Bantam Press, London (Deutsch: *Der Gotteswahn*. Ullstein, Berlin 2007).
- De La Mar, W.K. 2014. Estimating relative abundance of whales from historical Antarctic whaling records. – *Canadian Journal of Fisheries and Aquatic Science*, 71: 106–119.
- Demenocal, P.B., Stringer, C. 2016. Climate and the peopling of the world. – *Nature*, 538: 49–50.
- Diamond, J.M. 1985. How many unknown species are yet to be discovered? – *Nature*, 315: 538–539.
- Diamond, J.M. 1987. The worst mistake in the history of the human race. – *Discovery Magazine*, Mai 1987: 64–68.
- Diamond, Jared 1992. *The third chimpanzee. The evolution and future of the human animal*. HarperCollins, New York (Deutsch: *Der dritte Schimpanse*. S. Fischer, Frankfurt am Main 1994; hier zitiert nach der Neuauflage 2006 bei Harper Perennial).
- Diamond, Jared 1997. *Guns, germs, and steel. The fates of human societies*. W.W. Norton & Company, New York (Deutsch: *Arm und Reich. Das Schicksal menschlicher Gesellschaften*. S. Fischer, Frankfurt am Main 1998).
- Díaz, S. 2022. COP15 biodiversity plan risks being alarmingly diluted. – *Nature*, 612: 9–10.
- Díaz, S., Settele, J., Brondízio, E. S., Ngo, H. T., Agard, J., Arneth, A. ... & Zayas, C. N. 2019. Pervasive human-driven decline of life on Earth

- points to the need for transformative change. – *Science*, 366: 1327, eaax3100.
- Dicks, L.V. et al. 2016. Ten policies for pollinators. – *Science*, 354: 975–976.
- Dinerstein, E. et al. 2017. An ecoregion-based approach to protecting half the terrestrial realm. – *BioScience*, 67(6): 534–545.
- Dinerstein, E. et al. 2019. A global deal for nature: guiding principles, milestones, and targets. – *Science Advances*, 5: eaaw2869.
- Dinerstein, E. et al. 2020. A »Global Safety Net« to reverse biodiversity loss and stabilize Earth’s climate. – *Science Advances*, 6: eabb2824.
- Dirzo, R. 2011. Tropical Forests. – In: Chapin, F. Stuart et al. (eds.), *Global biodiversity in a changing environment: Scenarios for the 21st century*, pp. 251–276. Springer, New York.
- Dirzo, R. et al. 2014. Defaunation in the Anthropocene. – *Science* 345: 401–406.
- Dolrenry, S. et al. 2014. A metapopulation approach to African lion (*Panthera leo*) conservation. – *PLoS ONE*, 9(2): e88081.
- Donald, P.F. et al. 2001. Agricultural intensification and the collapse of Europe’s farmland bird populations. – *Proceedings of the Royal Society of London B*, 268: 25–29.
- Drummond-Clarke, R.C. et al. 2022. Wild chimpanzee behavior suggests that a savanna-mosaic habitat did not support the emergence of hominin terrestrial bipedalism. – *Science Advances*, 8: eadd9752.
- Dunn, Rob 2009. *Every living thing. Man’s obsessive quest to catalog life. From nanobacteria to new monkeys*. HarperCollins, New York.
- Düwecke, Peter 2000. *Darwins Affe. Sternstunden der Biologie*. C.H. Beck, München.
- Ehrlich, Paul R. 1968. *The population bomb*. Ballantine Books, New York.
- Ehrlich, P.R., Ehrlich, A.H. 2013. Can a collapse of global civilization be avoided? – *Proceedings of the Royal Society B*, 280(1754), 20 122 845.
- Eisenberg, Cristina 2014. *The carnivore way. Coexisting with and conserving North America’s predators*. Island Press, Washington, D.C.
- Eldredge, Niles 1991. *The miner’s canary*. Prentice Hall Press, New York (Deutsch: *Wendezeiten des Lebens. Katastrophen in Erdgeschichte und Evolution*. Spektrum Akademischer Verlag, Heidelberg 1994).

- Elhacham, E. et al. 2020. Global human-made mass exceeds all living biomass. – *Nature*, 588: 442–444.
- Ellis, E.C. et al. 2013. Used planet: a global history. – *Proceedings of the National Academy of Sciences*, 110(20): 7978–7985.
- Estes, James A. 2016. *Serendipity. An ecologist's quest to understand nature*. University of California Press, Oakland, California.
- Estes, J.A. et al. 2011. Trophic downgrading of planet Earth. – *Science*, 333: 301–306
- Estes, J.A. et al. 2016. Sea otters, kelp forests, and the extinction of Steller's sea cow. – *Proceedings of the National Academy of Sciences*, 113(4): 880–885.
- Estrada-Villegas, S. ... & Dent, D.H. 2023. Animal seed dispersal recovery during passive restoration in a forested landscape. – *Philosophical Transactions of the Royal Society B*, 378: 20 210 076.
- Facchini, Fiorenzo 1991. *Der Mensch. Ursprung und Entwicklung*. Natur Verlag, Augsburg.
- Fanta, V. et al. 2018. Equilibrium dynamics of European pre-industrial populations: the evidence of carrying capacity in human agricultural societies. – *Proceedings of the Royal Society B*, 285: 20 172 500.
- Fernandez-Armesto, Felipe 2006. *Pathfinders. A global history of exploration*. W.W. Norton & Company, New York, London.
- Finn, C., Grattarola, F. & Pincheira-Donoso, D. 2023. More losers than winners: investigating Anthropocene defaunation through the diversity of populations trends. – *Biological Reviews*, doi 10.1111/brv.12974.
- Flade, M., Sudfeldt, C. 2008. Vögel und Schutz der biologischen Vielfalt in Deutschland. – *Der Falke*, 55: 170–178.
- Flannery, Tim 2010. *Here on Earth. An argument for hope*. The Text Publishing Company, Melbourne (Deutsch: *Auf Gedeih und Verderb. Die Erde und wir: Geschichte und Zukunft einer besonderen Beziehung*. S. Fischer, Frankfurt am Main 2011).
- Flannery, Tim, Schouten, Peter 2001. *A gap in nature. Discovering the world's extinct animals*. Atlantic Monthly Press, New York.
- Fleckinger, Angelika 2018. *Ötzi, der Mann aus dem Eis*. Folio Verlag, Wien.

- Foley, J.A. et al. 2011. Solutions for a cultivated planet. – *Nature*, 478: 337–342.
- Foley, Robert 1995. *Humans before humanity*. Blackwell, Oxford (Deutsch: *Menschen vor Homo sapiens. Wie und warum unsere Art sich durchsetzte*. Jan Thorbecke, Stuttgart 2000).
- Fontaine, M.C. et al. 2012. History of expansion and anthropogenic collapse in a top marine predator of the Black Sea estimated from genetic data. – *Proceedings of the National Academy of Sciences*, 109(38): E2569–76.
- Fordyce, R.E., Marx, F.G. 2018. Gigantism precedes filter feeding in baleen whale evolution. – *Current Biology*, 28(10): 1670–1676, e2.
- Forster, Georg 1778. *Reise um die Welt*. Neuauflage 2007. Die Andere Bibliothek im Eichborn Verlag, Frankfurt am Main.
- Frankopan, Peter 2017. *Kriegspilger. Der erste Kreuzzug*. Rowohlt Berlin, Berlin.
- Fricke, E.C., et al. ... & Beaudrot, L. 2022. Collapse of terrestrial mammal food webs since the Late Pleistocene. – *Science*, 377: 1008–1011.
- Froese, R., Pauly, D. 2003. Dynamik der Überfischung. – In: Lozán, Jose L. et al. (Hrsg.), *Warnsignale aus Nordsee und Wattenmeer*. J.L. Lozán, Hamburg.
- Fu, Q. et al. 2014. Genome sequence of a 45,000-year-old modern human from western Siberia. – *Nature*, 514: 413.
- Fugère, V., Hendry, A.P. 2018. Human influences on the strength of phenotypic selection. – *Proceedings of the National Academy of Sciences*, 115: 10070–10075.
- Fuller, Errol 2000. *Extinct birds*. Oxford University Press, Oxford.
- Fuller, Errol 2013. *Lost animals. Extinction and the photographic record*. Bloomsbury, London.
- Galetti, M. et al. 2018. Ecological and evolutionary legacy of megafauna extinctions. – *Biological Reviews*, 93: 845–862.
- Gerland, P. et al. 2014. World population stabilization unlikely this century. – *Science*, 346: 234–237.
- Gibbons, A. 2014. How we tamed ourselves – and became modern. – *Science*, 346: 405–406.
- Gibbons, A. 2017a. Neanderthals mated early with modern humans. – *Science*, 356: 14.

- Gibbons, A. 2017b. The first Australians arrived earlier. – *Science*, 357: 238
- Gibbons, A. 2019. Moderns said to mate with late-surviving Denisovans. – *Science*, 364: 12–13.
- Gibbons, A. 2020. How Neanderthals lost their Y chromosome. – *Science News* (online, 24. September 2020; doi: 10.1126/science.ab9570).
- Gibbons, A. 2021. More than 45,000 years ago, modern humans ventured into Neanderthal territory. – *Science News* (online, 7. April 2021; doi: 10.1126/science.abi8830).
- Gibbons, A. 2022. Mysterious ancient humans may have given people of Papua New Guinea an immune advantage. – *Science News* (online, 8. Dez. 2022; doi: 10.1126/science.adg2133).
- Gilbert, N. 2022. Nations forge historic deal to save species: what's in and what's missing. – *Nature News* (online am 19. Dezember 2022; doi: 10.1038/d41586-022-04503-9).
- Glaubrecht, M. 2009. On »Darwinian Mysteries« or molluscs as models in evolutionary biology: From local speciation to global radiation. – *American Malacological Bulletin*, 27: 2–23.
- Glaubrecht, M. 2019a. *Das Ende der Evolution. Der Mensch und die Vernichtung der Arten*. C. Bertelsmann, München (Taschenbuchausgabe: Pantheon, München 2021).
- Glaubrecht, M. 2019b »Un peu de géographie des animaux«. Die Anfänge der Biogeographie als »Humboldtian Science«. – In: Ette, Ottmar (Hrsg.), edition humboldt digital. Berlin–Brandenburgische Akademie der Wissenschaften, Berlin. Online unter: <https://edition-humboldt.de/themen/biowissenschaften.xql>.
- Glaubrecht, M. 2019c. Vom Fettschwalm, Manati und Zitteraal. Alexander von Humboldts Tierleben. – In: Lubrich, Oliver, Nehrlich, Thomas (Hrsg.), Alexander von Humboldt: Sämtliche Schriften (Aufsätze, Artikel, Essays), S. 343–386. Berner Ausgabe. Deutscher Taschenbuch Verlag, München.
- Glaubrecht, M. 2020. »Un peu de géographie des animaux«. Die Anfänge der Biogeographie als »Humboldtian Science«. – In: Päßler, Ulrich (Hrsg.), Alexander von Humboldt: Geographie der Pflanzen. Unveröffentlichte Schriften aus dem Nachlass. S. 155–194. J. B. Metzler, Stuttgart.

- Glaubrecht, M. 2021. Humboldts Wissenschaft. Oder: Die Systematisierung und Dynamisierung der Natur. – In: Bloch, Sara Kviat, Lubrich, Oliver & Steinke, Hubert (Hrsg.), Alexander von Humboldt: Wissenschaften zusammendenken. Berner Universitätschriften (Band 62). S. 207–243. Haupt Verlag, Bern; und Bern Open Publishing, Universitätsbibliothek Bern (<https://doi.org/10.36950/BUS.62>)
- Glaubrecht, M. 2022a. *Die Rache des Pangolin. Wild gewordene Pandemien und der Schutz der Artenvielfalt*. Ullstein, Berlin.
- Glaubrecht, M. 2022b. »Through a country we never intended to see«. Revisiting the Humboldt renaissance. – In: Falk, G. C., Strecker, M. R. & Schneider, S. (eds.), Alexander von Humboldt – Multiperspective Approaches. S. 3–36. Springer Nature, Cham. (https://doi.org/10.1007/978-3-030-94008-9_1)
- Glaubrecht, M. 2022c. Ideengeschichte: Carl von Carlowitz – Die Erfindung der Nachhaltigkeit. – *Geo*, 12/2022: 116–124.
- Glaubrecht, M. 2023a. *Dichter, Naturkundler und Welterforscher: Adelbert von Chamisso und die Suche nach der Nordostpassage*. Galiani, Berlin.
- Glaubrecht, M. 2023b. On the end of evolution – Humankind and the annihilation of species. – *Zoologica Scripta*, 52(3): 215–225.
- Glaubrecht, M., Golani, D., Hofrichter, R. 2019. Biogeographie und Biodiversität. – In: Hofrichter, Robert (Hrsg.), *Das Mittelmeer. Geschichte und Zukunft eines ökologisch sensiblen Raums*, S. 830–877. Springer Spektrum, Heidelberg, Berlin.
- Gleich, Michael et al. 2000. *Life counts. Eine globale Bilanz des Lebens*. Berlin Verlag, Berlin.
- Gleick, P. H. 2018. Transitions to freshwater sustainability. – *Proceedings of the National Academy of Sciences*, 155: 8863–8871.
- Gleick, Peter H., Cooley, Heather, Morikawa, Mari 2009. *The world's water 2008–2009: The biennial report on freshwater resources*. Island Press, Washington, D.C.
- Goldschmidt, Tijs 1997. *Darwins Traumsee. Nachrichten von meiner Forschungsreise nach Afrika*. C.H. Beck, München.
- Gonzalez, A. & Londono, M.C. 2022. Monitor biodiversity for action. – *Science*, 378: 1147.
- Goswami, A. 2016. Radiation and extinction: investigating clade dy-

- namics in deep time. – *Biological Journal of the Linnean Society*, 118(1): 6–12.
- Goulson, D. 2014. Pesticides linked to bird declines. – *Nature*, 511: 295–296.
- Goulson, D. et al. 2015. Bee declines driven by combined stress from parasites, pesticides, and lack of flowers. – *Science*, 347: 1435–1442.
- Greenberg, Paul 2010. *Four fish. The future of the last wild food*. The Penguin Press, New York (Deutsch: *Vier Fische. Wie das Meer auf unseren Teller kommt*. Berlin Verlag, Berlin 2011).
- Greenspoon, L. et al. ... & Milo, R. 2023. The global biomass of wild mammals. – *Proceedings of the National Academy of Sciences*, 120(10): e220489120.
- Grober, Ulrich 2010. *Die Entdeckung der Nachhaltigkeit. Kulturgeschichte eines Begriffs*. Kunstmann, München.
- Grüneberg, C. et al. 2015. Rote Liste der Brutvögel Deutschlands. 5. Fassung. – In: Deutscher Rat für Vogelschutz (Hrsg.), *Berichte zum Vogelschutz*. Band 52, 19–67.
- Haberl, H. et al. 2007. Quantifying and mapping the human appropriation of the net primary production in earth's terrestrial ecosystems. – *Proceedings of the National Academy of Sciences*, 104(31): 12942–12947.
- Hackländer, K. 2005. *Feldhasen in der Kulturlandschaft: Die Bedeutung von Brachen für Nahrungsökologie, Energiehaushalt und Populationsdynamik*. Deutsche Wildtier-Stiftung, Hamburg.
- Haeckel, Ernst 1866. *Generelle Morphologie der Organismen. Allgemeine Grundzüge der organismischen Formen-Wissenschaft, mechanisch begründet durch die von Charles Darwin reformirte Descendenz-Theorie*. 2 Bde. Reimer, Berlin.
- Haeckel, Ernst 1920. *Natürliche Schöpfungs-Geschichte. Gemeinverständliche wissenschaftliche Vorträge über die Entwicklungslehre*. De Gruyter, Berlin.
- Hallmann, C.A. et al. 2014. Declines in insectivorous birds are associated with high neonicotinoid concentrations. – *Nature*, 511: 341–343.
- Hallmann, C.A. et al. 2017. More than 75 % decline over 27 years in total insect biomass in protected areas. – *PLoS ONE*, 12(10): e0185809.
- Hammerschlag, N. et al. 2018. Predator declines and morphological

- changes in prey: evidence from coral reefs depleted of sharks. – *Marine Ecology Progress Series*, 586: 127–139.
- Hannah, L. 2012. *Saving a million species. Extinction risk from climate change*. Island Press, Washington, D.C.
- Hannah, L. 2012. Are a million species at risk? – In: Hannah, Lee (ed.), *Saving a million species. Extinction risk from climate change*, pp. 3–9. Island Press, Washington, D.C.
- Harari, Yuval Noah 2013. *Eine kurze Geschichte der Menschheit*. Deutsche Verlags-Anstalt, München.
- Harari, Yuval Noah 2017. *Homo Deus. Eine Geschichte von Morgen*. C.H. Beck, München.
- He, F. & Hubbell, S.P. 2011. Species-area relationship always overestimate extinction rates from habitat loss. – *Nature*, 473: 368–371.
- He, F. et al. 2019. The global decline of freshwater megafauna. – *Global Change Biology*, doi 10.1111/gcb.14753.
- Hennig, W. 1957. Systematik und Phylogenie. Bericht über die Hundertjahrfeier der Deutschen Entomologischen Gesellschaft Berlin, 1956: 50–71. Akademie-Verlag, Berlin.
- Henschel, P. et al. 2014. The lion in West Africa is critically endangered. – *PLoS ONE*, 9(1): e83500.
- Hölldobler, B. 2015. Nachruf auf Hubert (Jim) Markl: 17. August 1938–8. Januar 2015. *Zoologie, Mitteilungen der Deutschen Zoologischen Gesellschaft* [2015]: 85–92.
- Hublin, J.-J. 2013. Paleoanthropology: *Homo erectus* and the limits of a paleontological species. – *Current Biology*, 24(2): R82–R84.
- Hughes, J.B. et al. 1997. Population diversity: its extent and extinction. – *Science*, 278: 689–692.
- Hughes, J.B. et al. 2000. The loss of population diversity and why it matters. – In: Raven, Peter Hamilton, Williams, Tania. (eds.), *Nature and human society: the quest for a sustainable world*, pp. 71–83. National Academy Press, Washington, D.C.
- Hughes, B.B., Eby, R., van Dyke, E., Tinker, M.T., Marks, C. I., Johnson, K.S. & Wasson, K. 2013. Recovery of a top predator mediates negative eutrophic effects on seagrass. – *Proceedings of the National Academy of Sciences*, 110(38): 15313–15318.
- Humboldt, Al(exander) von, Bonpland, A(imé) 1811–1833. *Recueil d'observations de zoologie et d'anatomie comparée, faites dans l'océan*

- Atlantique, dans l'intérieur du Nouveau Continent et dans la mer du Sud pendant les années 1799, 1800, 1801, 1802 et 1803.* Schoell, Paris.
- Hume, Julian P., Walters, Michael 2012. *Extinct birds*. Bloomsbury Publishing, London.
- Humphrey, N.K. 1976. The social function of intellect. – In: Bateson, P.P.G., Hinde, R.A. (eds.), *Growing points in ethology*, pp. 303–317. Cambridge University Press, Cambridge.
- Husemann, M. 2019. Insektensterben – Fakten, Ursachen und Lösungsansätze. – *Lynx*, 2019: 5–9.
- Hutchings, J. 2000. Collapse and recovery of marine fishes. – *Nature*, 406: 882–885.
- Inger, R. et al. 2014. European birds are declining rapidly while less abundant species' numbers are rising. – *Ecology Letters*, 18: 28–36.
- IPBES 2016. *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. The assessment report on pollinators, pollination and food production. Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn.
- IPBES 2018. *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. The assessment report on land degradation and restoration. Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn.
- IPBES 2019. *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. The global assessment report on biodiversity and ecosystem services. Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn.
- Irob, K., ... & Tietjen, B. 2023. Savanna resilience to droughts increases with the proportion of browsing wild herbivores and plant functional diversity. – *Journal of Applied Ecology*, 60(2): 251–262.
- IUCN 2018. *The IUCN Red List of Threatened Species*. www.iucnredlist.org.
- Jackson, J.A. et al. 2008. How few whales were there after whaling? Inference from contemporary mtDNA diversity. – *Molecular Ecology*, 17: 236–251.

- Jaramillo-Legorreta, A.M. et al. 2019. Decline towards extinction of Mexico's vaquita porpoise (*Phocoena sinus*). – *Royal Society Open Science*, 6(7): 190 598.
- Jetz, W. et al. 2007. Projected impacts of climate and land-use on the global diversity of birds. – *PloS Biology*, 5: e157.
- Jørgensen, C. et al. 2007. Ecology: Managing Evolving Fish Stocks. – *Science*, 318: 1247–1248.
- Johanson, Donald, Blake, Edgar 1996. *From Lucy to Language*. George Weidenfeld & Nicolson Ltd. (Deutsch: *Lucy und ihre Kinder*. Spektrum Akademischer Verlag, Heidelberg, Berlin 1998).
- Johnson, J.A., Runge, C.F., Senauer, B., Foley, J. & Polasky, S. 2014. Global agriculture and carbon trade-offs. – *Proceedings of the National Academy of Sciences*, 111: 12342–12347.
- Jones, K.R. et al. 2018a. One-third of global protected land is under intense human pressure. – *Science*, 360: 788–791.
- Jones, K.R. et al. 2018b. The location and protection status of Earth's diminishing marine wilderness. – *Current Biology*, 28(15): R803–R846, 2365–2514.
- Joppa L.N., Roberts, D.L., Pimm, S.L. 2011. How many species of flowering plants are there? – *Proceedings of the Royal Society B* 278: 554–559.
- Joppa, L.N. et al. 2013. Achieving the convention on biological diversity's goals for plant conservation. – *Science*, 341: 1100–1103.
- Jung, M. et al. ... & Visconti, P. 2021. Areas of global importance for conserving terrestrial biodiversity, carbon and water. – *Nature Ecology and Evolution*, 5: 1499–1509.
- Kahlheber, A. 2004. Der Erschöpfung der Weltmeere. – *Spektrum der Wissenschaft*, November 2004: 60–68.
- Kahneman, Daniel 2011. *Thinking, fast and slow*. Macmillan, London (Deutsch: *Schnelles Denken, langsames Denken*. Siedler Verlag, München 2012).
- Keesing, F., Ostfeld, R.S. 2015. Is biodiversity good for your health? – *Science*, 349: 235–236.
- Kegel, Bernhard 2018. *Ausgestorben, um zu bleiben. Dinosaurier und ihre Nachfahren*. DuMont Buchverlag, Köln.

- Keith, D.A. et al. 2022. A function-based typology for Earth's ecosystems. – *Nature*, 610: 513–518.
- Kipling, Rudyard 2015. *Das Dschungelbuch*. Herausgegeben und übersetzt von Andreas Nohl. Steidl, Göttingen.
- Kipling, Rudyard 2016. *Der Schmetterling, der mit dem Fuß aufstampfte*. Herausgegeben und übersetzt von Andreas Nohl. Hanser, München.
- Klein, A.-M. et al. 2007. Importance of pollinators in changing landscapes for world's crops. – *Proceedings of the Royal Society B*, 274: 303–313.
- Klein, Richard 1999. *The human career*. University of Chicago Press, Chicago.
- Klingholz, Rainer 2014a. *Sklaven des Wachstums. Die Geschichte einer Befreiung*. Campus, Frankfurt am Main.
- Klingholz, R. 2014b. Absage an den Untergang. Warum noch in diesem Jahrhundert die Weltbevölkerung zu schrumpfen beginnt. – *Die Zeit*, Nr. 07: 33–35.
- Klingholz, Reiner 2021. *Zu viel für diese Welt. Wege aus der doppelten Überbevölkerung*. Edition Körber-Stiftung, Hamburg.
- Klingholz, Reiner, Lutz, Wolfgang 2016. Wer überlebt? Bildung entscheidet über die Zukunft der Menschheit. Campus, Frankfurt am Main.
- Klum, M. 2001. Asia's last lions. – *National Geographic*, 199(6): 46–61.
- Kohler, Alfred 2006. *Columbus und seine Zeit*. C.H. Beck, München.
- Kolbert, Elizabeth 2014. *The sixth extinction. An unnatural history*. Henry Holt, New York (Deutsch: *Das sechste Sterben*. Suhrkamp, Berlin 2015).
- Krause, J. & Trappe, T. 2019. *Die Reise unserer Gene. Eine Geschichte über uns und unsere Vorfahren*. Propyläen, Berlin.
- Krause, J. & Trappe, T. 2021. *Hybris. Die Reise der Menschheit zwischen Aufbruch und Scheitern*. Propyläen, Berlin.
- Kroodsma, D.A. et al. 2018. Tracking the global footprint of fisheries. – *Science*, 359: 904–908
- Krumenacker, T. 2016. Neue Rote Liste der Brutvögel Deutschlands: Sinkflug vieler Arten hält an. – *Der Falke*, 63(10): 20–24.
- Kurlansky, Mark 1997. *Cod. A biography of the fish that changed the world*. Walker & Company, New York (Deutsch: *Kabeljau. Der Fisch, der die Welt veränderte*. Claassen, München 1999).

- Küster, Hansjörg 2017. *Deutsche Landschaften. Von Rügen bis zum Donautal*. C.H. Beck, München.
- Ladle, R.J. et al. 2004. Danger of crying wolf over risk of extinction. – *Nature*, 428: 799.
- Landau, Misia 1991. *Narratives of human evolution*. Yale University Press, New Haven, London.
- Langgut, D. et al. 2018. Evidence for a humid interval at ~56–44 ka in the Levant and its potential link to modern humans dispersal out of Africa. – *Journal of Human Evolution*, 124: 75–90.
- Larsen, B.B. et al. 2017. Inordinate fondness multiplied and redistributed: the number of species on Earth and the new pie of life. – *The Quarterly Review of Biology*, 92(3): 229–265.
- Larsen, C.S. 2023. The past 12,000 years of behavior, adaptation, population, and evolution shaped who we are today. – *Proceedings of the National Academy of Sciences*, 120 (4): e2209613120.
- Larson, S. 2012. Did australopiths climb trees? – *Science* 338: 478–479.
- Laurance, W. F. et al. 2012. Averting biodiversity collapse in tropical forest protected areas. – *Nature*, 489: 290–294.
- Leakey, Richard, Lewin, Roger 1995. *The sixth extinction: patterns of life and the future of humankind*. Doubleday, New York.
- Leather, S.R. 2018. »Ecological Armageddon« – more evidence for the drastic decline in insect numbers. – *Annals of Applied Biology*, 172: 1–3.
- Lee, R. 2011. The outlook for population growth. – *Science*, 333: 569–573.
- Le Saout, S. et al. 2013. Protected areas and effective biodiversity conservation. – *Science*, 342: 803–805.
- Lewin, Roger 1992. *Spuren der Menschwerdung. Die Evolution des Homo sapiens*. Spektrum Akademischer Verlag, Heidelberg.
- Lewinsohn, T. M. et al. 2022. Insect decline in Brazil: an appraisal of current evidence. – *Biology Letters*, 18: 20220219.
- Lieberman, D.E. 2012. Those feet in ancient times. – *Nature*, 483: 550–551.
- Lister, B.C., Garcia, A. 2018. Climate-driven declines in arthropod abundance restructure a rainforest food web. – *Proceedings of the National Academy of Sciences*, 115(44): E10397–E10406.

- Livi-Bacci, M. 2006. *A concise history of world population*. 4. Auflage. Blackwell, Oxford.
- Livi-Bacci, M. 2012. *A short history of migration*. Polity Press, Cambridge.
- Lomborg, Björn 2002. *Apocalypse no! Wie sich die menschlichen Lebensgrundlagen wirklich entwickeln*. Zu Klampen Verlag, Lüneburg.
- Lovejoy, C.O. 1989. Die Evolution des aufrechten Gangs. – *Spektrum der Wissenschaft*, Januar 1989: 92–100.
- Lubchenco, J. 2016. The sea-otter wisher. – *Nature*, 533: 318–319.
- Luo, S.-J., Kim, J.-H., Johnson, W.E., van der Walt, J., Martenson, J., Yuhki, N., Miquelle, D.G., & O'Brien, S.J. 2004. Phylogeography and genetic ancestry of tigers (*Panthera tigris*). – *PLoS Biology*, 2(12): 2275–2293.
- Luo, Y. 2020. Neanderthal DNA raises risk of severe Covid. – *Nature*, 587: 552–553.
- MacLaurin, James, Sterelny, Kim 2008. *What is biodiversity?* University of Chicago Press, Chicago.
- MacLeod, Norman 2013. *The great extinctions*. The Natural History Museum, London (Deutsch 2016: *Artensterben. Wendepunkte der Evolution*. Theiss Verlag, Darmstadt).
- MacPhee, Ross D.E. (ed.) 1999. *Extinctions in near time*. Kluwer Academic, New York.
- MacPhee, Ross D.E. 2019. *End of the megafauna. The fate of the world's hugest, fiercest, and strangest animals*. W.W. Norton & Company, New York.
- Maier, Donald S. 2012. *What's so good about biodiversity? A call for better reasoning about nature's value*. Springer, Heidelberg.
- Malthus, Thomas Robert 1798. *An Essay on the principle of population*. John Murray, London. Erweiterte und revidierte Auflage 1803; Neuausgabe: Flew, Antony (ed.) 1970. Penguin English Library, London.
- Mandahl-Barth, Georg 1972. *Hvad finder jeg pa stranden*. 8. Auflage. Politikens Forlag, Kopenhagen.
- Mann, Charles C. 2005. *1491: New revelations of the Americas before Columbus*. Alfred Knopf, New York (Deutsch: *Amerika vor Kolumbus. Die Geschichte eines unentdeckten Kontinents*. Rowohlt, Reinbek bei Hamburg 2016).
- Mann, Charles C. 2011. *1493. Uncovering the New World Columbus*

- created. Alfred Knopf, New York (Deutsch: *Kolumbus' Erbe. Wie Menschen, Tiere, Pflanzen die Ozeane überquerten und die Welt von heute schufen*. Rowohlt, Reinbek bei Hamburg 2013).
- Mann, Charles C. 2018. *The wizard and the prophet. Two remarkable scientists and their dueling visions to shape tomorrow's world*. Alfred Knopf, New York.
- Martin, J.-L. et al. 2016. The need to respect nature and its limits challenges society and conservation science. – *Proceedings of the National Academy of Sciences*, 113(22): 6105–6112.
- Martin, R.D. 1995. Hirngröße und menschliche Evolution. – *Spektrum der Wissenschaft*, September 1995: 48–55.
- Matthies, V. 2015. Die Puntfahrten als Archetypus späterer Entdeckungsreisen. Zur Rezeption der ägyptischen Puntfahrten in der entdeckungsgeschichtlichen Literatur. – *Archäologie-online* (veröffentlicht 05.06.2015).
- Matthies, Volker 2018. *Im Schatten der Entdecker. Indigene Begleiter europäischer Forschungsreisender*. Ch. Links Verlag, Berlin.
- Mattioli, Aram 2017. *Verlorene Welten. Eine Geschichte der Indianer Nordamerikas*. Klett-Cotta, Stuttgart.
- Maxwell, S.L. et al. ... & Watson, J.E.M. 2020. Area-based conservation in the twenty-first century. – *Nature*, 586: 217–227.
- May, R.M. 1988. How many species are there on Earth? – *Science*, 241: 1441–1449.
- May, R.M. 1992. How many species inhabit the Earth? – *Scientific American*, 10/1992: 18–24 (Deutsch: Wie viele Arten von Lebewesen gibt es? – *Spektrum der Wissenschaft*, Dezember 1992: 72–79).
- May, R.M. 1994. Conceptual aspects of the quantification of the extent of biological diversity. – *Philosophical Transactions of the Royal Society London*, B 345: 13–20.
- May, R.M. 2002. The future of biological diversity in a crowded world. – *Current Science*, 82(11): 1325–1331.
- May, R.M. 2010. Ecological science and tomorrow's world. – *Philosophical Transactions of the Royal Society London*, B 365: 41–47.
- May, R.M. 2011. Why worry about how many species and their loss? – *PLoS Biology*, 9(8): e1001130.
- Mayer, Hans Eberhard 1989. *Geschichte der Kreuzzüge*. 7., verbesserte Auflage. W. Kohlhammer, Stuttgart.

- Mayr, Ernst 2004. *What makes biology unique? Considerations on the autonomy of a scientific discipline*. Cambridge University Press, Cambridge [Deutsch: *Konzepte der Biologie*. S. Hirzel, Stuttgart (2005)].
- Mazaris, A.D. et al. 2017. Global sea turtle conservation successes. – *Science Advances*, 3(9): e1600730.
- Mazel, F. et al. 2018. Prioritizing phylogenetic diversity captures functional diversity unreliably. – *Nature Communications*, 9: 2888.
- McCauley, D.J. et al. 2015. Marine defaunation: animal loss in the global ocean. – *Science*, 347: 247–254.
- McGowen, M.R. et al. 2009. Divergence date estimation and a comprehensive molecular tree of extant cetaceans. – *Molecular Phylogenetics and Evolution*, 53: 891–906.
- McGowen, M.R. et al. 2014. Molecular evolution tracks macroevolutionary transitions in Cetacea. – *Trends in Ecology and Evolution*, 29(6): 336–346.
- McKibben, William 1989. *The end of nature*. Paperback edition with a new introduction 2006. Random House, New York.
- McRae, J. et al. 2016. The Living Planet Index. In: WWF (ed.), *The Living Planet Report*. WWF, Genf.
- Meadows, Dennis L. et al. 1972. *The Limits to Growth. A report for the Club of Rome's project on the predicament of mankind*. Universe Books, New York (Deutsch: *Die Grenzen des Wachstums. Bericht des Club of Rome zur Lage der Menschheit*. DVA, Stuttgart).
- Meindl, R.S., Chaney, M.E., Lovejoy, C.O. 2018. Early hominids may have been weed species. – *Proceedings of the National Academy of Sciences*, 115(6): 1244–1249.
- Meister, B. et al. 2016. Brutbestand, Bruterfolg und jährliche Überlebensrate von Kleinvogelarten – Ergebnisse des Integrierten Monitorings von Singvogelpopulationen in Deutschland (MS) 1998 bis 2013. – *Vogelwarte*, 54: 90–108.
- Mellars, P. 2006. Why did modern human population disperse from Africa ca. 60.000 years ago? A new model. – *Proceedings of the National Academy of Sciences*, 103(25): 9381–9386.
- Memarzadeh, M. et al. 2019. Rebuilding global fisheries under uncertainty. – *Proceedings of the National Academy of Sciences*, 116(32): 15985–15990.

- Milam, E.L. 2016. The ascent of man and the politics of humanity's evolutionary future. – *Endeavour*, 40(4): 225–237.
- Millennium Ecosystem Assessment 2005. *Ecosystem and human well-being: biodiversity synthesis*. World Resources Institute, Washington, D.C.
- Mittermeier, R. A. et al 2003. Wilderness and biodiversity conservation. – *Proceedings of the National Academy of Sciences* 100: 10309–10313.
- Monastersky, R. 2014. Life – a status report. – *Nature*, 516: 159–161.
- Mooers, A.O., Greenberg, D.A. 2018. Speciation far from the madding crowd. – *Nature*, 559: 341–342.
- Mora, C. et al. 2011. How many species are there on Earth and in the ocean? – *PloS Biology*, 9(8): e1001127.
- Moreno-Mayar, J.V. et al. 2018. Early human dispersal within the Americas. – *Science*, 362: 1128; eaav2621.
- Morris, P.A., Morris, M.J. 2009. Evidence of the former abundance of tigers (*Panthera tigris*) and leopards (*Panthera pardus*) from the taxidermy ledgers of Van Ingen & Van Ingen, Mysore. – *Archives of Natural History*, 36(1): 53–62.
- Muller, A. et al. 2017. Strategies for feeding the world more sustainably with organic agriculture. – *Nature Communications*, 8: 1290.
- Myers, R.A., Worm, B. 2003. Rapid worldwide depletion of predatory fish communities. – *Nature*, 423: 280–283.
- Myers, N. 2000. The meaning of population loss. – In: Raven, Peter Hamilton, Williams, Tania (eds.), *Nature and human society*, pp. 63–70. National Academy Press, Washington, D.C.
- Nesse, Randolph M., Williams, George C. 1995. *Why we get sick. The new science of Darwinian medicine*. Times Books, New York (Deutsch: *Warum wir krank werden. Die Antworten der Evolutionsmedizin*. C.H. Beck, München 1997).
- Newton, I. 2004. The recent declines of farmland bird populations in Britain: an appraisal of causal factors and conservation actions. – *Ibis*, 146(4): 579–600.
- Nielsen, R. et al. 2017. Tracing the peopling of the world through genomics. – *Nature*, 541: 302–310.

- Novacek, Michael J. (ed.) 2001. *The biodiversity crisis: Losing what counts*. The New Press, New York.
- Novacek, M.J. 2008. Engaging the public in biodiversity issues. – *Proceedings of the National Academy of Sciences*, 105: 11571–11578.
- O'Brien, S.J. et al. 1987. Evidence for African origins of founders of the Asiatic lion species survival plan. – *Zoo Biology*, 6(2): 99–116.
- Ohl, M. 2022. *Expeditionen zu den ersten ihrer Art. Außergewöhnliche Tiere und die Geschichte ihrer Entdeckung*. dtv, München.
- Ortega-Garcia, S. & Saldana-Vasquez, R.A. 2022. Synthesis of knowledge of the plant diet of nectar-feeding bats of Mexico. – *Therya*, 13(3): 335–343.
- Osterhammel, Jürgen 2009. *Die Verwandlung der Welt. Eine Geschichte des 19. Jahrhunderts*. C.H. Beck, München.
- Osterhammel, Jürgen 2017. *Die Flughöhe der Adler. Historische Essays zur globalen Gegenwart*. C.H. Beck, München.
- Outhwaite, C.L., McCann, P., Newbold, T. 2022. Agriculture and climate change are reshaping insect biodiversity worldwide. – *Nature*, 605: 97–102.
- Padian, K. 2019. We are tied to tectonics. – *Nature*, 565: 425–426.
- Parzinger, Hermann 2014. *Die Kinder des Prometheus. Eine Geschichte der Menschheit vor der Erfindung der Schrift*. C.H. Beck, München.
- Paul, A.-L., Elardo, S.M. & Ferl, R. 2022. Plants grown in Apollo lunar regolith present stress-associated transcriptomes that inform prospects for lunar exploration. – *Communications Biology*, 5: 382.
- Pauly, D. 1995. Anecdotes and the shifting baseline syndrome of fisheries. – *Trends in Ecology and Evolution*, 10(10): 430.
- Pauly, D., Watson, R. 2003. Counting the last fish. – *Scientific American*, Juli 2003: 42–47.
- Pearce, Fred 2007. *Wenn die Flüsse versiegen*. Kunstmann Verlag, München.
- Pearce, F. 2011. Dubious assumptions prime population bomb. – *Nature*, 473: 125.
- Pearson, H. C., Savoca, M. S., Costa, D. P., Villaseñor-Derbez, J. C., Wing, S. R. & Roman, J. 2023. Whales in the carbon cycle: can re-

- covery remove carbon dioxide? – *Trends in Ecology & Evolution*, 38 (3): 238–249.
- Petr, M. et al. 2020. The evolutionary history of Neanderthal and Denisovan Y chromosomes. – *Science*, 369: 1653–1656.
- Pimm, S.L. 1984. The complexity and stability of ecosystems. – *Nature*, 307: 312–326.
- Pimm, S.L., Brooks, T.M. 2000. The sixth extinction: how large, where, and when. – In: Raven, Peter Hamilton, Williams, Tania (eds.), *Nature and human society*, pp. 46–60. National Academy Press, Washington, D.C.
- Pimm, S.L., Raven, P.H. 2000. Biodiversity: extinction by numbers. – *Nature*, 403: 843–845.
- Pimm, S.L., Jenkins, C. 2005. Biologische Vielfalt: Schutz ist bezahlbar. – *Spektrum der Wissenschaft*, November 2005: 72–80.
- Pimm, S.L., Jenkins, C. & Li, B.V. 2018. How to protect half of Earth to ensure it protects sufficient biodiversity. – *Science Advances*, 4: eaat2616.
- Pimm, S.L. et al. 1995. The future of biodiversity. – *Science*, 269: 347–350.
- Pimm, S.L. et al. 2006. Human impacts on the rates of recent, present, and future bird extinctions. – *Proceedings of the National Academy of Sciences*, 103: 10941–10946.
- Pimm, S.L. et al. 2014. The biodiversity of species and their rates of extinction, distribution, and protection. – *Science*, 344: 987, 1 246 752.
- Pinson, A. et al. ... Pääbo, S., & Huttner, W. B. 2022. Human TKTL1 implies greater neurogenesis in frontal neocortex of modern humans than Neanderthals. – *Science*, 377: eabl6422.
- Potts, S.G. et al. 2010. Global pollinator declines: trends, impacts and drivers. – *Trends in Ecology and Evolution*, 25(6): 345–353.
- Potts, S.G. et al. 2016. Safeguarding pollinators and their values to human well-being. – *Nature*, 540: 220–229.
- Price, S.A., Gittleman, J.L. 2007. Hunting to extinction: biology and regional economy influence extinction risk and the impact of hunting in artiodactyls. – *Proceedings of the Royal Society B*, 274: 1845–1851.
- Prillaman, M. 2023. Geologists seek to define the Anthropocene. – *Nature*, 613: 14–15.

- Purvis, A. et al. 2000. Nonrandom extinction and the loss of evolutionary history. – *Science*, 288: 328–330.
- Rader, R. et al. 2016. Non-bee insects are important contributors to global crop pollination. – *Proceedings of the National Academy of Sciences*, 113(1): 146–151.
- Radkau, Joachim 2000. *Natur und Macht. Eine Weltgeschichte der Umwelt*. C.H.Beck, München.
- Ramesh, N. et al. 2019. The small world of global marine fisheries: the cross-boundary consequences of larval dispersal. – *Science*, 364: 1192–1196.
- Randers, Jorgen 2012. 2052. *A global forecast for the next forty years*. Chelsea Green Publishing, White River Junction (Deutsch: 2052. *Der neue Bericht an den Club of Rome. Eine globale Prognose für die nächsten 40 Jahre*. Oekom Verlag, München 2012).
- Raup, David M. 1991. *Extinction. Bad genes or bad luck?* W.W. Norton & Company, New York (Deutsch: *Ausgestorben. Zufall oder Vorsehung?* vgs Verlagsgesellschaft, Köln 1992).
- Raven, P.H., Williams, T. (eds), 1997. *Nature and human society. Proceedings of the 1997 Forum on Biodiversity*. National Academic Press, Washington, D.C.
- Raven, P.H., Gereau, R.E., Phillipson, P.B., Chatelain, C., Jenkins, C.N. & Ulloa, C.U. 2020. The distribution of biodiversity richness in the tropics. – *Science Advances*, 6(37), eabc6228.
- Ray, D.K. et al. 2013. Yield trends are insufficient to double global crop production by 2050. – *PloS ONE*, 8(6): e66428.
- Reichholf, Josef H. 1990. *Das Rätsel der Menschwerdung. Die Entstehung des Menschen im Wechselspiel mit der Natur*. DVA, München.
- Reichholf, J.H. 2003. Das Rätsel der Menschwerdung. Entscheidende Stufen in der Evolution des Menschen. – In: Fischer, Ernst Peter, Wiegandt, Klaus (Hrsg.), *Evolution. Geschichte und Zukunft des Menschen*, S. 102–126. S. Fischer, Frankfurt am Main.
- Reichholf, Josef H. 2007. *Stadtnatur: Eine neue Heimat für Tiere und Pflanzen*. Oekom Verlag, München.
- Reichholf, Josef H. 2008. *Ende der Artenvielfalt? Gefährdung und Vernichtung von Biodiversität*. S. Fischer, Frankfurt am Main.

- Reichholf, Josef H. 2014. *Ornis. Das Leben der Vögel*. C.H. Beck, München.
- Reinhard, Wolfgang 2016. *Die Unterwerfung der Welt. Globalgeschichte der europäischen Expansion 1415–2015*. C.H. Beck, München.
- Renn, Jürgen 2022. *Die Evolution des Wissens. Eine Neubestimmung der Wissenschaft für das Anthropozän*. Suhrkamp, Frankfurt am Main.
- Reyes-Centeno, H. et al. 2015. Testing modern human out-of-Africa dispersal models and implications for modern human origins. – *Journal of Human Evolution*, 87: 95–106.
- Reynolds, J.D. et al. 2005. Biology of extinction risk in marine fishes. – *Proceedings of Biological Sciences*, 272: 2337–2344.
- Richards, John F. 2003. *The unending frontier. An environmental history of the early modern world*. University of California Press, Berkeley.
- Rigal, S. et al. 2023. Farmland practices are driving bird population decline across Europe. – *Proceedings of the National Academy of Sciences*, 120(21): e2216573120.
- Ripple, W.J. et al. 2014. Status and ecological effects of the world's largest carnivores. – *Science*, 343: 1 241 484.
- Ripple, W.J. et al. 2015. Collapse of the world's largest herbivores. – *Science Advances*, 1: 1 400 103.
- Ripple, W.J. et al. 2017a. World scientists' warning to humanity: a second notice. – *BioScience*, 67(12): 1026–1028.
- Ripple, W.J. et al. 2017b. Extinction risk is most acute for the world's largest and smallest vertebrates. – *Proceedings of the National Academy of Sciences*, 114(40): 10678–10683.
- Roberts, Alice (ed.) 2011. *Evolution. The human story*. Dorling Kindersley, London (Deutsch: *Die Anfänge der Menschheit. Vom aufrechten Gang bis zu den frühen Hochkulturen*. Dorling Kindersley, München 2012).
- Roberts, C.M. et al. 2002. Marine biodiversity hotspots and conservation priorities for tropical reefs. – *Science*, 295: 1280–1284.
- Rocha, R.C. et al. 2014. Emptying the oceans: A summary of industrial whaling catches in the 20th century. – *Marine Fisheries Review*, 76(4): 37–48.
- Rodger, J.G. et al. 2021. Widespread vulnerability of flowering plant

- seed production to pollinator declines. – *Science Advances*, 7(42): DOI: 10.1126/sciadv.abd3524.
- Rodrigues, A.S.L. et al. 2018. Forgotten Mediterranean calving grounds of grey and North Atlantic right whales: evidence from Roman archaeological records. – *Proceedings of the Royal Society B*, 285: 20180961.
- Roffler, G.H., Eriksson, C.E., Allen, J.M. & Levi, T. 2023. Recovery of a marine keystone predator transforms terrestrial predator–prey dynamics. – *Proceedings of the National Academy of Sciences*, 120(5): e2209037120.
- Röhrlich, Dagmar 2006. *Evolution auf der Achterbahn. Oder warum wir Menschen unsere Existenz einem Vulkanausbruch verdanken*. Bloomsbury, Berlin.
- Roman, J., Palumbi, S. 2003. Whales before whaling in the North Atlantic. – *Science*, 301: 508–510.
- Rosenberg, K. V., Dokter, A. M., Blancher, P. J., Sauer, J. R., Smith, A. C., Smith, P. A. ... & Marra, P. P. 2019. Decline of the North American avifauna. – *Science*, 366: 120–124.
- Rounsevell, M.D.A., Harfoot, M., Harrison, P.A., Newbold, T., Gregory, R.D. & Mace, G.M. 2020. A biodiversity target based on species extinctions. – *Science*, 368: 1193–1195.
- Ruxton, G.D., Wilkinson, D.M. 2011. Avoidance of overheating and selection for both hair loss and bipedality in hominins. – *Proceedings of the National Academy of Sciences*, 108(52): 20965–20969.
- Sánchez-Bayo, F., Wyckhuys, K.A.G. 2019. Worldwide decline of the entomofauna: a review of its drivers. – *Biological Conservation*, 232: 8–27.
- Schaper, Rüdiger 2018. *Alexander von Humboldt. Der Preuße und die neuen Welten*. Siedler Verlag, München.
- Scheffer, M. et al. 2018. Toward a unifying theory of biodiversity. – *Proceedings of the National Academy of Sciences*, 115(4): 639–641.
- Scholz, L. 2019. *Die Menge der Menschen. Eine Figur der politischen Ökologie*. Kulturverlag Kadmos, Berlin.
- Schrenk, F. 2019. Die Homininen. – In: Klempt, Eberhard (Hrsg.), *Explodierende Vielfalt*. Springer Verlag, Heidelberg.

- Schrenk, Friedemann, Bromage, Timothy G. 2002. *Adams Eltern. Expeditionen in die Welt der Frühmenschen*. C.H. Beck, München.
- Schrenk, F., Sandrock, O. 2015. Expanding worlds. – In: Hessisches Landesmuseum Darmstadt (Hrsg.), *Homo. Originale Urmenschen-Funde aus fünf Weltregionen*, S. 33–43. Theiss Verlag, Darmstadt.
- Schulze, Gerhard 1996. *Die Schweinswale*. Die Neue Brehm-Bücherei, Bd. 583. Westarp Wissenschaften, Magdeburg.
- Seto, K. L. et al. 2023. Fishing through the cracks: The unregulated nature of global squid fisheries. – *Science Advances*, 9: eadd8125.
- Settele, J. 2019. Insektensterben. Beunruhigender Sinkflug. – *Spektrum der Wissenschaft*, Mai 2019: 12–21.
- Seayfarth, R.M., Cheney, D.L. 2016. Brain size predicts problem-solving ability in mammalian carnivores. – *Proceedings of the National Academy of Sciences*, 113: 2532–2537.
- Sharma, S. & Dutta, T. & Maldonado, J.E. & Wood, T.C. & Panwar, H.S. & Seidensticker, J. 2013. Forest corridors maintain historical gene flow in a tiger metapopulation in the highlands of central India. – *Proceedings of the Royal Society of London B: Biological Sciences*, 280(1767): 20 131 506.
- Shipman, Pat 1994. *The evolution of racism. Human differences and the use and abuse of science*. Simon & Schuster, New York (Deutsch: *Die Evolution des Rassismus. Gebrauch und Missbrauch von Wissenschaft*. S. Fischer, Frankfurt am Main 1995).
- Shortall, C.R. et al. 2009. Long-term changes in the abundance of flying insects. – *Insect Conservation and Diversity*, 2: 251–260.
- Singh, H.S., Gibson, L. 2011. A conservation success story in the otherwise dire megafauna extinction crisis: the Asiatic lion (*Panthera leo persica*) of Gir Forest. – *Biological Conservation*, 144(5): 1753–1757.
- Siviter, H., Bailes, E.J., Martin, C.D. et al. 2021. Agrochemicals interact synergistically to increase bee mortality. – *Nature*, 596: 389–392.
- Small, E. 2011. The new Noah's ark: beautiful and useful species only. Part 1. Biodiversity conservation issues and priorities. – *Biodiversity*, 12: 232–247.
- Small, E. 2012. The new Noah's ark: beautiful and useful species only. Part 2. The chosen species. – *Biodiversity*, 13: 37–53.
- Smith, F.A. et al. 2018. Body size downgrading of mammals over the late Quaternary. – *Science*, 360: 310–313.

- Smith, R. et al. 2005. A quantitative analysis of the abundance and demography of European hares *Lepus europaeus* in relation to habitat type, intensity of agriculture and climate. – *Mammal Review*, 35(1): 1–24.
- Sodhi, N.S. et al. 2004. Southeast Asian biodiversity: an impending disaster. – *Trends in Ecology and Evolution*, 19(12): 654–660.
- Sommer, Volker 1992. *Lob der Lüge. Täuschung und Selbstbetrug bei Tier und Mensch*. C.H. Beck, München.
- Spindler, Konrad 2000. *Der Mann im Eis. Neue sensationelle Erkenntnisse über die Mumie in den Ötztaler Alpen*. Goldmann, München.
- Steffen, W. et al. 2011. The Anthropocene: conceptual and historical perspectives. – *Philosophical Transactions of the Royal Society, A* 369: 842–867.
- Stiftung Vogelmonitoring Deutschland, Dachverband Deutscher Avifaunisten (Hrsg.) 2015. *Atlas Deutscher Brutvogelarten*. Dachverband Deutscher Avifaunisten, Münster.
- Stokstad, E. 2014. The empty forest. – *Science*, 345: 397–399.
- Stokstad, E. 2017a. European bee study fuels debate over pesticide ban. – *Science*, 356: 1321.
- Stokstad, E. 2017b. Endangered right whales are dying in record numbers off Canada, raising alarm. – *Science*, online 24. August 2017: aap7559.
- Stokstad, E. 2022. New biodiversity pact sets ambitious targets, but will nations deliver? – *Science News* (online am 22. Dezember 2022: doi: 10.1126/science.adg4247).
- Stokstad, E. 2023. Nations agree on long-sought high seas biodiversity treaty. – *Science*, 379: 971.
- Strain, D. 2011. 8.7 million: a new estimate for all the complex species on Earth. – *Science*, 333: 1083.
- Streit, B. 2007. *Was ist Biodiversität? Erforschung, Schutz und Wert biologischer Vielfalt*. C.H. Beck, München.
- Strona, G., Bradshaw, C.J.A. 2022. Coexistence dominate future vertebrate losses from climate and land use change. – *Science Advances*, 8: eabn4345.
- Stuart-Smith, R. D. et al. 2013. Integrating abundance and functional traits reveals new global hotspots of fish diversity. – *Nature*, 501: 539–542.

- Sudfeldt, Christoph et al. 2013. *Vögel in Deutschland 2013*. DDA, BfN, LAG VSW, Münster.
- Sunquist, M.E., Sunquist, F.C. 2009. Family Felidae (Cats). – In: Wilson, Don E., Mittermeier, Russell A. (eds.), *Handbook of the Mammals of the World*. Bd. 1: Carnivores. Lynx Edicions, Barcelona.
- Swaay, C. van et al. 2013. *The European grassland butterfly indicator: 1990–2011*. European Environment Agency Technical Report, no. 11/2013. European Union Publication, Luxembourg.
- Tallavaara, M., Eronen, J.T., Luoto, M. 2018. Productivity, biodiversity, and pathogens influence the global hunter-gatherer population density. – *Proceedings of the National Academy of Sciences*, 115: 1232–1237.
- Tattersall, Ian 2013. *Masters of the Planet. The search for our human origins*. St. Martin's Griffin, New York.
- Tattersall, Ian 2015. *The strange case of the rickety cossack. And other cautionary tales from human evolution*. Palgrave Macmillan, London, New York.
- Tewksbury, J.J., Rogers, H.S. 2014. An animal-rich future. – *Science*, 345: 400.
- Thiel, R. 2011. Die Fischfauna europäischer Ästuarie. Eine Strukturanalyse mit Schwerpunkt Tideelbe. – *Abhandlungen des Naturwissenschaftlichen Vereins in Hamburg*, NF 43: 1–157.
- Thomas, C.D. 2012. First estimates of extinction risk from climate change. – In: Hannah, Lee (ed.), *Saving a million species. Extinction risk from climate change*, pp. 11–27. Island Press, Washington, D.C.
- Thomas, C.D. et al. 2004. Extinction risk from climate change. – *Nature*, 427: 145–148.
- Thomas, J.A. et al. 2004. Comparative losses of British butterflies, birds, and plants and the global extinction crisis. – *Science*, 303: 1879–1881.
- Thomas, J.A. 2005. Monitoring change in the abundance and distribution of insects using butterflies and other indicator groups. – *Philosophical Transactions of the Royal Society*, B 360: 339–357.
- Thomas, J.A. 2016. Butterfly communities under threat. – *Science*, 353: 216–218.
- Thorpe, S.K.S., Holder, R.L., Crompton, R.H. 2007. Origin of human

- bipedalism as an adaptation for locomotion on flexible branches. – *Science*, 316: 1328–1331.
- Tilman, D. et al. 2014. Biodiversity and ecosystem functioning. – *Annual Review of Ecology, Evolution, and Systematics*, 45: 471–493.
- Tilman, D. et al. 2017. Future threats to biodiversity and pathways to their prevention. – *Nature*, 546: 73–81.
- Timmermann, A, Friedrich, T. 2016. Late Pleistocene climate drivers of early human migration. – *Nature*, 538: 92–95.
- Tollefson, J. 2011. Seven billion and counting. – *Nature*, 478: 300.
- Tollefson, J. 2019. One million species face extinction. – *Nature*, 569: 171.
- Toor, M. van et al. 2019. Linking colony size with quantitative estimates of ecosystem services of African fruit bats. – *Current Biology*, 29: R225–R240.
- Toussaint, A. et al. 2021. Extinction of threatened vertebrates will lead to idiosyncratic changes in functional diversity across the world. – *Nature Communications*, 12: 5162.
- Tucci, S., Akey, J. 2016. A map of human wanderlust. – *Nature*, 538: 179–180.
- Turner, David 2011. *Was Beethoven a birdwatcher? A quirky look at birds in history and culture*. Summersdale, Chichester.
- UNFPA 1999. *The state of world population*. United Nations Population Fund, New York.
- United Nations 2013. *World Population Prospects: The 2012 Revision*. Population Division, Department of Economic and Social Affairs, New York.
- United Nations 2022. *World Population Prospects 2022*. Department of Economic and Social Affairs, Population Division, New York.
- van der Wal, A.J. et al. 2013. Do natural landscape reduce future discounting in humans. – *Proceedings of the Royal Society*, B 280: 20132–20135.
- Vellend, M. et al. 2017. Plant biodiversity change across scales during the Anthropocene. – *Annual Review of Plant Biology*, 68: 563–586.
- Venkataraman, V.V., Kraft, T.S., Dominy, N.J. 2013. Tree climbing and

- human evolution. – *Proceedings of the National Academy of Sciences*, 110(4): 1237–1242.
- Venter, O. et al. 2016. Sixteen years of change in the global terrestrial human footprint and implications for biodiversity conservation. – *Nature Communications*, 7: 12558.
- Vespasiani, D.M. et al. 2022. Denisovan introgression has shaped the immune system of present-day Papuans. – *PLoS Genetics*, 18(12): e1010470.
- Vignieri, S. 2014. Vanishing fauna. – *Science*, 345: 393–395.
- Visconti, P. et al. 2019a. Protected area targets post-2020. – *Science*, 364: 239–241.
- Visconti, P. et al. 2019b. Response: A bold successor to Aichi Target 11. – *Science*, 364: 239–241.
- Vitousek, P.M. et al. 1986. Human appropriation of the product of photosynthesis. – *BioScience*, 36(6): 368–373.
- Vogel, Christian 2000. *Anthropologische Spuren. Zur Natur des Menschen*. S. Hirzel, Stuttgart.
- Vogel, G. 2017. Where have all the insects gone? – *Science*, 356: 576–579.
- Voosen, P. 2016. Anthropocene pinned to postwar period. – *Science*, 353: 852–853.
- Vorpahl, Frank 2023. *Aufbruch im Licht der Sterne. Wie Tupaia, Mahine und Mai Captain Cook den Weg durch die Südsee erschlossen*. Galiani, Berlin.
- Waal, Frans de 2005. *Our inner ape. A leading primatologist explains why we are who we are*. Riverhead Books, Penguin Group, London (Deutsch: *Der Affe in uns. Warum wir sind, wie wir sind*. Hanser, München 2006).
- Waal, Frans de 2016. *Are we smart enough to know how smart animals are?* Granta Books, London.
- Waldron, Anthony, Adams, V., Allan, J., Arnell, A., Asner, G., Atkinson, S. ... & Zhang, Y.P. 2020. *Protecting 30 % of the planet for nature: costs, benefits and economic implications. Working paper analysing the economic implications of the proposed 30 % target for areal protection in the draft post-2020 Global Biodiversity Framework*. Campaign for Nature, Science and Innovation, National Geographic Society,

- Washington, D.C. (Online unter: www.conservation.cam.ac.uk/files/waldron_report_30_by_30_publish.pdf).
- Wallace, Alfred Russel 1876. *The geographical distribution of animals*. Macmillan, London (Deutsch: *Die geographische Verbreitung der Tiere*. R. von Zahn, Dresden).
- Wallace, Alfred Russel 1898. *The wonderful century*. Swan Sonnenschein, London.
- Wallace, Alfred Russel. 1910. *The world of life*. Chapman & Hall, London.
- Waters, C.N. et al. 2016. The Anthropocene is functionally and stratigraphically distinct from the Holocene. – *Science*, 351: 137–147.
- Waters, C.N., Turner, S.D. 2022. Defining the onset of the Anthropocene. – *Science*, 378: 706–708.
- Watson, J.E.M., Venter, O. 2017. A global plan for nature conservation. – *Nature*, 550: 48–49.
- Watson, J.E.M. et al. 2018. Protect the last of the wild. – *Nature*, 563: 27–30.
- Watts, T.W. et al. 2018. Revisiting the Marshmallow test. A conceptual replication investigating links between early delay of gratification and later outcomes. – *Psychological Science*, 29 (7): 1159–1177.
- Wearn, O.R. et al. 2012. Extinction debt and windows of conservation opportunity in the Brazilian Amazon. – *Science*, 337: 228–231.
- Wells, Spencer 2002. *The journey of man: a genetic odyssey*. Allen Lane, London (Deutsch: *Die Wege der Menschheit. Eine Reise auf den Spuren der genetischen Evolution*. S. Fischer, Frankfurt am Main 2002).
- West, P.C. et al. 2014. Leverage points for improving global food security and the environment. – *Science*, 345: 325–328.
- Westaway, K.E. et al. 2017. An early modern human presence in Sumatra 73,000–63,000 years ago. – *Nature*, 548: 322–325.
- Wheeler, Q.D. 2010. What would NASA do? Mission-critical infrastructure for species exploration. – *Systematics and Biodiversity*, 8(1): 11–15.
- Wheeler Q.D. et al. 2012. Mapping the biosphere, exploring species to understand the origin, organization and sustainability of biodiversity. – *Systematics and Biodiversity*, 10(1): 1–20.
- Williams, D.R., Rondinini, C., Tilman, D. 2022. Global protected areas seem insufficient to safeguard half of the world's mammals from

- human-induced extinction. – *Proceedings of the Royal Society B*, 280: e20130486.
- Wilson, Edward O. 1988. The current state of biological diversity. – In: Wilson, Edward O., Peter, Frances M. (eds.), *Biodiversity*, pp. 3–17. National Academy Press, Washington, D.C.
- Wilson, Edward O. 1992. *The diversity of life*. Allen Lane, London (Deutsch: *Der Wert der Vielfalt. Die Bedrohung des Artenreichtums und das Überleben des Menschen*. Piper, München 1996).
- Wilson, Edward O. 2002. *The future of life*. Alfred Knopf, New York (Deutsch: *Die Zukunft des Lebens*. Siedler Verlag, Berlin 2002).
- Wilson, Edward O. 2014. *The meaning of human existence*. Liveright, New York.
- Wilson, Edward O. 2016. *Half Earth. Our planet's fight for life*. Live-right, New York (Deutsch: *Die Hälfte der Erde. Ein Planet kämpft um sein Leben*. C.H. Beck, München 2016).
- Wilson, Edward O., Peter, Frances M. (eds.) 1988. *Biodiversity*. National Academy Press, Washington, D.C.
- Winiwarter, Verena, Bork, Hans-Rudolf 2014. *Geschichte unserer Umwelt. Sechzig Reisen durch die Zeit*. Primus, Darmstadt.
- Wood, B. 1993. Four legs good, two legs better. – *Nature*, 363: 587–588.
- World Economic Forum 2019. The Global Risks Report 2019. World Economic Forum, in partnership with Marsh & McLennan Companies and Zurich Insurance Group, Genf. (Online unter: www.weforum.org/reports/the-global-risks-report-2019).
- Worm, B. 2015. A most unusual (super)predator. – *Science*, 349: 784–785.
- Worm, B. & Tittensor, D.P. 2018. *A theory of global biodiversity*. Princeton University Press, Princeton.
- WWF 2022. *Living Planet Report 2022*. World Wide Fund for Nature International, Gland, Switzerland.
- Zabel, F., Putzenlechner, B., Mauser, W. 2014. Global agricultural land resource. A high resolution suitability evaluation and its perspectives until 2100 under climate change conditions. – *PLoS ONE*, 9(9): e107522.
- Zahid, H.J., Robinson, E., Kelly, R.L. 2016. Agriculture, population

- growth, and statistical analysis of the radiocarbon record. – *Proceedings of the National Academy of Sciences*, 113: 931–935.
- Zalasiewicz, J. 2017. Geologie. Eine vielschichtige Angelegenheit. – *Spektrum der Wissenschaft*, Januar 2017: 12–20.
- Zalasiewicz, J. et al. 2010. The new world of the Anthropocene. – *Environmental Science & Technology*, 44(7): 2228–2231.
- Zalasiewicz, J. et al. 2017. Scale and diversity of the physical technosphere: A geological perspective. – *The Anthropocene Review*, 4(1): 9–22.
- Zalasiewicz, Jan et al. (eds.) 2019. *The Anthropocene as a geological time unit. A guide to the scientific evidence and current debate*. Cambridge University Press, Cambridge.
- Zeberg, H., Pääbo, S. 2020. The major genetic risk factor for severe Covid-19 is inherited from Neanderthals. – *Nature*, 587: 610–612.
- Zeberg, H., Pääbo, S. 2021. A genomic region associated with protection against severe Covid-19 is inherited from Neandertals. – *Proceedings of the National Academy of Sciences*, 118(9): e2026309118.
- Zeckau, Hanna, Aermes, Carsten 2007. *Brehms verlorenes Tierleben. Zweitausendeins*, Frankfurt am Main.
- Zeller, E., Timmermann, A., Yun, K.-S., Stein, K. & Ruan, J. 2023. Human adaptation to diverse biomes over the past 3 million years. – *Science*, 380: 604–608.
- Zeng, Y, Koh, L.P., Wilcove, D.S. 2022. Gains in biodiversity conservation and ecosystem services from the expansion of the planet's protected areas. – *Science Advances*, 8: eabl9885.
- Zydelis, R. et al. 2013. The incidental catch of seabirds in gillnet fisheries: a global review. – *Biological Conservation*, 162: 76–88.