



U.S. college students consider next steps after an announcement that classes will be held online for 3 weeks to mitigate the spread of COVID-19.

Edited by Jennifer Sills

Preventing COVID-19 prejudice in academia

The coronavirus disease 2019 (COVID-19) outbreak has triggered global panic (1). Because the disease emerged in China and most of the affected individuals so far have been of Asian origin, a backlash of Asia-phobic reactions has been reported in various regions of the world (2–4). As it moves through Europe, Europeans may also be at risk of discrimination. Given that xenophobia during outbreaks is not uncommon (5), universities should proactively develop policies that support students, faculty, and staff affected by discriminatory behavior both now and in the future. To study or work abroad, members of academia often must travel far from home, adapt to another culture, and overcome a language barrier. Facing prejudice, including discrimination related to COVID-19, may add to feelings of isolation (6, 7) and affect career development, especially for students.

Preventive measures by universities to lessen prejudice should include transparency about the disease status, data gathering, and direction about appropriate behavior. University administrators should release reassuring statements about the local COVID-19 situation that supplement the information released by health authorities. Academic administrators should survey students and staff of Asian origin (as well as others if appropriate) to determine whether they have experienced any prejudice related to COVID-19 and whether

they expect university authorities to take any additional action. The administrators should also release statements that explain that in Asia, people wear masks for a variety of reasons, such as to filter polluted air, make fashion or political statements, or provide social indicators that they want to be left alone in public spaces (8). Typical surgical face masks do not necessarily indicate someone is sick, and as many students are likely aware, they do little to prevent catching viral infections (9).

Universities can also launch social media campaigns that support Asian and Asian-American students (and other targets) in the form of infographics or videos. Both university administrators and department heads should issue a notice that COVID-19-related prejudice or xenophobic reactions from academic staff and other students will not be tolerated and will be treated in accordance with anti-discrimination laws. Finally, university leaders at all levels should encourage students and academic staff to provide extra support and kindness to Asian and other international students during the ongoing outbreak.

Piotr Rzymiski* and Michał Nowicki²

¹Department of Environmental Medicine, Poznan University of Medical Sciences, 0-781 Poznań, Poland. ²Department of Histology and Embryology, Poznan University of Medical Sciences, 60-806 Poznań, Poland.

*Corresponding author.
Email: rzymkipiotr@ump.edu.pl

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10.1126/science.abb4870

Humpback dolphins at risk of extinction

The humpback dolphin genus (*Sousa* spp.) has recently been revised to contain four species: *S. teuszii*, *S. plumbea*, *S. chinensis*, and *S. sahalensis* (1). All four species are listed on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (2). *S. chinensis* and *S. sahalensis* are classified as Vulnerable on the International Union for Conservation (IUCN) Red List, *S. plumbea* is Endangered, and *S. teuszii* is Critically Endangered (3, 4). The humpback dolphins and their habitats—shallow, coastal waters of the eastern Atlantic, Indian, and western Pacific oceans—are threatened by fishing, vessel traffic, habitat degradation and destruction, environmental contaminants, and prey depletion, putting the humpback dolphins at risk of extinction (4–7). Interventions at the national and international levels are urgently needed.

Environmental pollution and other anthropogenic activities affect humpback dolphins throughout their territories. High levels of organochlorines have been found in the blubber of humpback dolphins in China and South Africa (8, 9). Large-scale dredging, drilling, land reclamation,

construction blasting, boat traffic, resource extraction, and other coastal development projects are concentrated within humpback dolphin habitat and threaten their survival in Africa, India, southeastern China, and northern Australia (4, 7, 9, 10).

Saving the humpback dolphins, a charismatic megafauna and valuable genetic resource, is important to nearshore marine biodiversity (4). Yet dolphin populations in poor, developing countries receive little study and management attention (4). Even in the territories of relatively wealthy and well-developed nations, such as Australia, China, and South Africa, the state and local governments have failed to provide adequate protection for the humpback dolphins to prevent population declines (4, 7, 10).

To ensure the safety of humpback dolphins, scientists and conservationists must thoroughly evaluate and recognize the conservation status and risk factors of the various species, subspecies, and populations. Governments of countries that are home to humpback dolphins should also take urgent action to support extensive and substantive national and international collaboration to put in place a set of conservation actions, such as helping coastal fishermen to broaden their income sources and decrease their reliance on nearshore fishing, thereby reducing the threat to humpback dolphins and their habitats.

Songhai Li

Marine Mammal and Marine Bioacoustics Laboratory, Institute of Deep-Sea Science and Engineering, Chinese Academy of Sciences, Sanya, 572000, China. Email: lish@idsse.ac.cn

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10.1126/science.abb5744

A first step for the Yangtze

As China has rapidly developed over the past 40 years, the Yangtze River has suffered a severe loss of biodiversity. The baiji (Yangtze river dolphin) is likely extinct (1), the Yangtze finless porpoise is critically endangered and declining (2), and more than 30% of Yangtze fish species are at the brink of extinction (3). This year, a Chinese research team reported on the extinction of the Chinese paddlefish (4). The decline of

vertebrate biodiversity in the Yangtze River is primarily attributable to illegal fisheries and excessive fishing (5). Chinese policy to discourage overfishing has improved, but more must be done to prevent the extinction of many of these species.

In 2002, China initiated an annual 3-month closure of all commercial fisheries on the Yangtze River. In 2016, the closure was increased to 4 months. Two years later, fisheries were banned in all of China's aquatic biological reserves (2). Then, in January 2020, China instituted a 10-year ban on all commercial fishing in the Yangtze River and its tributaries, including the adjoining lakes (6). The new regulations were enacted in an effort to save endangered Yangtze River aquatic life and prevent further extinctions. The initial 10-year period of the fishery ban was chosen because it will extend through two to three generations for most of the fish species in the Yangtze River (7). Although implementation of the fishing ban will face many logistic difficulties, this is a momentous first step, which, together with a shift in public support for conservation (2), gives us great hope for the protection of aquatic life in the Yangtze River.

Despite these positive steps, many species remain at risk of extinction. It will be important to quantify the extinction risk for species in the Yangtze Basin in the coming years. We must also anticipate the disproportionate effects on biodiversity that could result from the loss of groups with a longer evolutionary history, fewer system branches, and fewer species (8, 9). Because of its unique ancient evolutionary characteristics, the baiji was given conservation priority among the 4510 mammals in the world (9), and the Chinese paddlefish was the basal group in all ray-finned fish (10); now both are likely extinct. To prevent further extinctions, in addition to adhering to the fishing ban, we must invest more in research to identify those (potentially less iconic) species that are at greatest risk of extinction and which would result in the greatest loss of global biodiversity.

Zhigang Mei^{1*}, Peilin Cheng^{2*}, Kexiong Wang¹, Qiwei Wei², Jay Barlow³, Ding Wang¹

¹Key Laboratory of Aquatic Biodiversity and Conservation of the Chinese Academy of Sciences, Institute of Hydrobiology, Wuhan 430072, China. ²Key Laboratory of Freshwater Biodiversity Conservation, Ministry of Agriculture of China, Yangtze River Fisheries Research Institute, Chinese Academy of Fishery Sciences, Wuhan 430223, China. ³National Oceanic and Atmospheric Administration, Southwest Fisheries Science Center, La Jolla, CA 92037, USA. *Corresponding author. Email: meizhigang@ihb.ac.cn (Z.M.); chengpeilin@yfi.ac.cn (P.C.)

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10.1126/science.abb5537

TECHNICAL COMMENT ABSTRACTS

Comment on "Amphibian fungal panzootic causes catastrophic and ongoing loss of biodiversity"

Max R. Lambert, Molly C. Womack, Allison Q. Byrne, Obed Hernández-Gómez, Clay F. Noss, Andrew P. Rothstein, David C. Blackburn, James P. Collins, Martha L. Crump, Michelle S. Koo, Priya Nanjappa, Louise Rollins-Smith, Vance T. Vredenburg, Erica B. Rosenblum Scheele *et al.* (Reports, 29 March 2019, p. 1459) bring needed attention to the effects of amphibian infectious disease. However, the data and methods implicating the disease chytridiomycosis in 501 amphibian species declines are deficient. Which species are affected, and how many, remain critical unanswered questions. Amphibians are imperiled; protective actions require public support and robust science. Full text: [dx.doi.org/10.1126/science.aay1838](https://doi.org/10.1126/science.aay1838)

Response to Comment on "Amphibian fungal panzootic causes catastrophic and ongoing loss of biodiversity"

Ben C. Scheele, Frank Pasmans, Lee F. Skerratt, Lee Berger, An Martel, Wouter Beukema, Aldemar A. Acevedo, Patricia A. Burrows, Tamile Carvalho, Alessandro Catenazzi, Ignacio De la Riva, Matthew C. Fisher, Sandra V. Flechas, Claire N. Foster, Patricia Frías-Álvarez, Trenton W. J. Garner, Brian Gratwicke, Juan M. Guayasamin, Mareike Hirschfeld, Jonathan E. Kolby, Tiffany A. Kosch, Enrique La Marca, David B. Lindenmayer, Karen R. Lips, Ana V. Longo, Raúl Maneyro, Cait A. McDonald, Joseph Mendelson III, Pablo Palacios-Rodríguez, Gabriela Parra-Olea, Corinne L. Richards-Zawacki, Mark-Oliver Rödel, Sean M. Rovito, Claudio Soto-Azat, Luís Felipe Toledo, Jamie Voyles, Ché Weldon, Steven M. Whitfield, Mark Wilkinson, Kelly R. Zamudio, Stefano Canessa

Lambert *et al.* question our retrospective and holistic epidemiological assessment of the role of chytridiomycosis in amphibian declines. Their alternative assessment is narrow and provides an incomplete evaluation of evidence. Adopting this approach limits understanding of infectious disease impacts and hampers conservation efforts. We reaffirm that our study provides unambiguous evidence that chytridiomycosis has affected at least 501 amphibian species. Full text: [dx.doi.org/10.1126/science.aay2905](https://doi.org/10.1126/science.aay2905)

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Science **367** (6484), 1313.
DOI: 10.1126/science.abb4870

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