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Recovered Tibetan antelope at risk again

The Tibetan antelope (*Pantholops hodgsonii*) is an iconic species endemic to the Tibetan Plateau and is the last long-distance migratory ungulate in the region (1). From 1950 to the early 1990s, the species' population declined by 90% due to rampant illegal poaching (2). Thanks to the joint conservation efforts of the Chinese government and international community since the late 1990s, the population has recovered to 200,000 individuals (3). However, the Tibetan plateau is currently experiencing accelerating climate change (4), and the antelope now faces severe climate change-related threats.

Every summer, tens of thousands of antelopes from multiple wintering areas migrate hundreds of kilometers to a shared calving site at Zonag Lake in Hoh Xil Nature Reserve (5). However, in September 2011, a combination of heavy

precipitation, increased glacier melting, and permafrost thawing increased water levels, causing the natural dam containing Zonag Lake to burst (6). The resulting flood formed deep-cutting riverbanks along the traditional antelope migration route, flowing eastward and converging on downstream Yanhu Lake, known for its high salinity (7). A potential spillover of Yanhu Lake is expected in the next 1 to 2 years (6). Meanwhile, the drained Zonag Lake's area is 40% smaller than its original size (8).

These changes to the landscape have serious ramifications for antelope survival. The newly formed riverbanks obstruct the traditional migration route. Antelopes have been observed diverging from the route and are forced to calve along the shore of the downstream Kusai Lake (8). The few individuals that have managed to migrate to the Zonag Lake have had limited access to water surfaces because of its decreased size. Disruptions to migration routes and calving sites are known to cause decreased reproductive success and fitness in ungulate populations (9, 10). If Yanhu Lake were to spill over, the high salinity would lead to catastrophic degradation of the Hoh Xil grassland ecosystem, upon which Tibetan antelopes rely for survival.

Extreme climate-related hazards to wildlife and ecosystems, now occurring worldwide, must be recognized and addressed decisively. To ensure the continued conservation of Tibetan antelopes, the ecological integrity of their current home range must be preserved.

We call on policy-makers to facilitate scientific monitoring and research, explore evidence-based management options, and act swiftly to save one of China's historic conservation success stories.

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TECHNICAL COMMENT ABSTRACTS

Comment on "Cultural flies: Conformist social learning in fruitflies predicts long-lasting mate-choice traditions"

Stephen Thornquist and Michael Crickmore

The claims of Danchin *et al.* (Research Articles, 30 November 2018, p. 1025) regarding long-lasting mate preference based on conformity may result from systematic experimental error. Even if mate copying were a genuine phenomenon, it is unlikely to result in persisting culture in the wild.

Full text: [dx.doi.org/10.1126/science.aaw8012](https://doi.org/10.1126/science.aaw8012)

Response to Comment on "Cultural flies: Conformist social learning in fruitflies predicts long-lasting mate-choice traditions"

Arnaud Pocheville, Sabine Nöbel, Guillaume Isabel, Etienne Danchin

Thornquist and Crickmore claim that systematic experimental error may explain the results of Danchin and colleagues. Their claim rests on mistakes in their analyses, for which we provide corrections. We reassert that conformity in fruitflies predicts long-lasting mate-preference traditions.

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Tibetan antelopes, a conservation success story, now suffer from climate change–driven habitat disruption.