

Captive-breeding will not save wild Asian Houbara without regulation of hunting

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The survival of the heavily exploited Asian Houbara depends on the regulation of trapping and hunting, according to research led by the University of East Anglia (UEA).

New findings published today reveal that trying to stabilise populations solely through captive breeding will require the release of such large numbers it will inevitably compromise wild populations.

The Asian Houbara, a large, spectacular bird that breeds from the Middle East through Asia, is of major cultural and political significance because of Arab falconry, with hunting influencing international diplomacy. The species is threatened by uncontrolled hunting and poaching, which has caused its decline in the Middle East and Central Asia since the 1960s.

Attempts to conserve the species while also supporting the ancient tradition of Arabian falconry have focused on releasing captive-bred birds in increasing numbers. But research published today in the journal *Biological Conservation* shows that the species in Uzbekistan is declining by more than 9 per cent each year, and that the number of captive-bred birds needed to be released annually just to stabilise this [population](#) would be 1.5 times larger than the wild population itself.

Although captive-breeding can help rescue species from extinction, it bears many risks [see Notes to editors], and such mass-scale releases may compromise the fitness of [wild populations](#). Sustainable hunting and

[conservation](#) instead needs an integrated approach that also includes controls on hunting, according to Prof Paul Dolman, professor of conservation ecology in UEA's School of Environmental Sciences.

Prof Dolman said: "While captive-breeding can be a valuable conservation tool, over-reliance on it without tackling the unsustainable scale of hunting and trapping cannot save the houbara and may in itself become an additional threat.

"Developing a truly sustainable model of hunting requires international cooperation between falconers and the countries with houbara, to regulate hunting and trapping using sound biological evidence."

The study comes from a long-term collaboration between the Emirates Bird Breeding Centre for Conservation (EBBCC), BirdLife International and UEA. The research aims to develop a sustainable future for the wild Asian Houbara populations that also preserves traditional Arab falconry, with sustainable hunting strategies based on robust transparent scientific evidence. The work was conducted with permission from the State Committee for Nature Conservation of the Republic of Uzbekistan.

The study used data collected over seven years of desert fieldwork in Uzbekistan and satellite-tracking wild and released birds, to understand the houbara's breeding productivity, survival and population trend. The researchers predict numbers to be declining at 9.4 per cent each year, driven by unsustainable levels of hunting and trapping on the wintering grounds in Iran, Afghanistan and Pakistan.

Captive-bred birds survive worse than young wild birds, and to stabilise the population in the 14,300 km² study area and compensate for a modest hunting quota within Uzbekistan, would require releasing one-and-a half times the wild population number each year. To put this in context, 7200 captive-bred birds would have to be released into a

population of 4700 birds every spring just to keep the population from decreasing. Apart from the huge expense this would risk domestication of the wild breeding stock, making it less fit than its wild ancestors.

However, the UEA team also showed that regulating hunting and trapping can substantially reduce the numbers of captive-bred birds that need to be released. This integrated approach will be vital if hunting is to become sustainable.

Prof Nigel Collar, Leventis Fellow at BirdLife International, honorary professor at UEA, and chair of the IUCN Bustard Specialist Group, was a close collaborator in the study.

Prof Collar said: "Bustards in Asia are disproportionately in trouble. The current reliance on captive-breeding diverts resources and attention away from other key conservation needs for the Asian Houbara, such as tackling illicit trade for falcon training, establishing safe havens along the flyways and reducing threats from power lines. A holistic, multi-faceted approach to houbara conservation is now absolutely essential."

Dr. Robert Burnside, a senior researcher on the project from UEA's School of Environmental Sciences, said: "The Asian Houbara is a fascinating bird that has evolved to live and be successful in one of the toughest terrestrial environments on the planet.

"The vast desert environment and the cryptic colour and behaviour of the houbara make it extremely difficult to study. We could not have done this research without the advanced satellite-tracking technology we used to follow more than 100 houbara during their breeding and migration. We were able to determine whether [birds](#) that died succumbed to [hunting](#), trapping, collisions with power lines or natural causes. On several occasions, local hunters took the transmitter of a hunted bird back to their homes, as the satellite imagery showed."

More information: The study, 'Captive breeding cannot sustain migratory Asian Houbara *Chlamydotis macqueenii* without hunting controls', is published in the journal *Biological Conservation* on Nov 14, 2018.

Provided by University of East Anglia

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