

Clearly not all houbara with transmitters that get hunted are returned to us, and we have cases of transmitters fitted on wild houbara in the Arabian Peninsula that have abruptly changed their behaviour



Photo by NARC

“Good wildlife management does require going outside with a telescope sometimes.”

and made high-speed movements along roads and across borders before disappearing without trace, presumably as a result of the bird in question being caught by a hunting party and the transmitter sending the last of its data from on board a vehicle.

Our information on mortality rates and breeding success has been instrumental in elevating IUCN Red List status of the houbara from ‘Low risk/near threatened’ to ‘Vulnerable’ in 2004. It is hoped that an agreement for conservation of the Asian houbara, which has been circulated to all the governments of Asian houbara range countries by Saudi Arabia via the Convention on Migratory Species (Bonn Convention) will act as a future framework for houbara conservation activities in the region. Whilst building the international cooperation necessary to implement conservation efforts under the CMS will be a challenging task, the clear evidence that can be presented from satellite tracking studies, to show that these countries do in fact share the same birds, can only help the effort.

If we can search for any negative result that using satellite transmitters has given us, it is that the use of these attractive high-tech gadgets, and the visually appealing tracking maps that can be produced from the data, result in it being harder for us to influence budget choices away from buying more transmitters at the expense of organizing field expeditions

and recruiting staff for the bread-and-butter ground truthing and data gathering that is also required. Good wildlife management does require going outside with a telescope sometimes.

For now and the future, the introduction of GPS PTTs is expanding our fieldwork options. When fitted on females, they should allow us to remotely determine, for the first time, nesting behaviour and nest locations with an accuracy useful in fieldwork situations. It is also envisaged to fit males with 45 gram GPS PTTs, to investigate male-male and male-female interactions on the display site, as a contribution to developing a scientific understanding of the houbara breeding system.

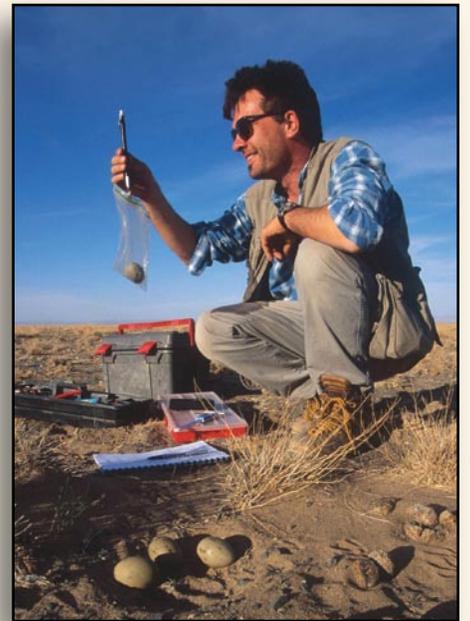
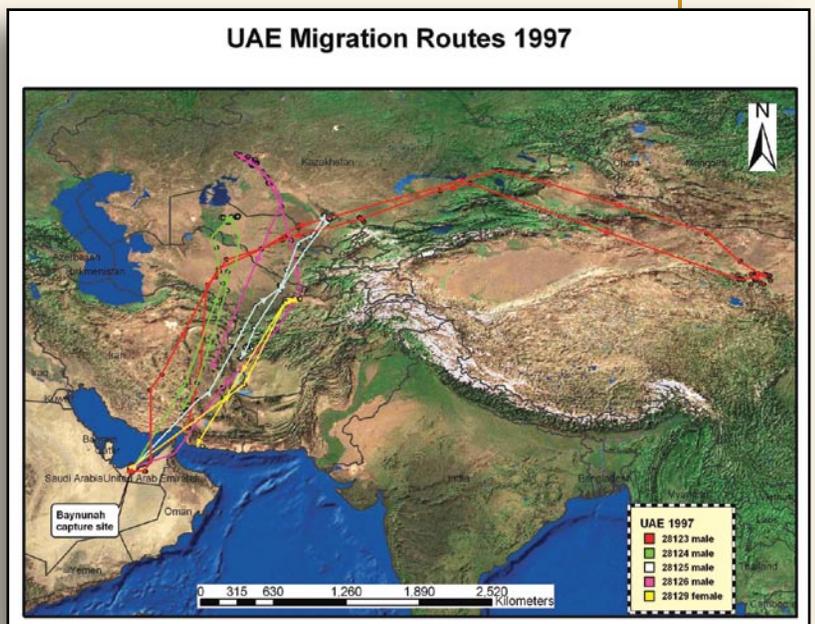
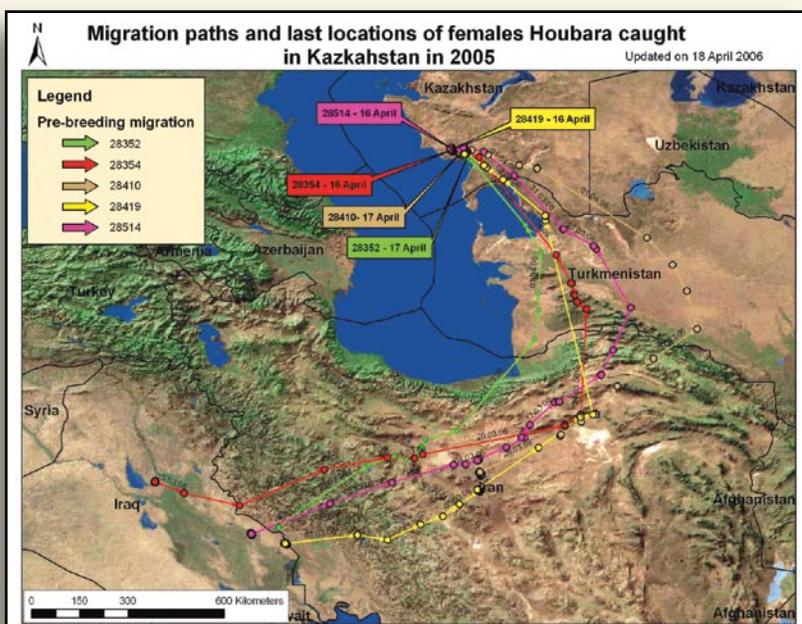


Photo by Michel Gunther

Olivier Combreau finds a houbara nest in Mongolia.



UAE 1997. This map shows the return and outward migration for five houbara caught on their wintering area in UAE during 1997. The coloured lines show the path to breeding ground and back for each individual. The track going deep into China was a big surprise for us. It extended our known range for houbara eastwards and stimulated the development of a long-term collaboration with China.



Kazakhstan GPS PTT females. This map shows the return migration for five female houbara caught last year in Kazakhstan, as they return to their breeding ground from wintering sites in Iraq and Iran.

Combreau, O., Launay, F. & Lawrence, M. (2002) As assessment of annual mortality rates in adult-sized migrant Houbara bustards (*Chlamydotis [undulata] macqueenii*). *Anim. Conserv.* 4: 133-141.

Judas, J., Combreau, O., Lawrence, M., Saleh, M., Launay, F. & Xingyi, G. (2006) Migration and range use of Asian Houbara Bustard *Chlamydotis macqueenii* breeding in the Gobi Desert, China, revealed by satellite tracking. *Ibis* 148: 343-351.

Osborne, P.E., Al Bowardi, M. & Bailey, T.A. (1997) Migration of the Houbara Bustard *Chlamydotis undulata* from Abu Dhabi to Turkmenistan: the first results from satellite tracking studies. *Ibis* 139: 192-196.