

An update on the wintering status of Sociable Lapwings *Vanellus gregarius* in Saudi Arabia with a new wintering location in the Eastern province

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The Sociable Lapwing *Vanellus gregarius* is currently listed as critically endangered by the IUCN due to a rapid population decline of more than 90% (Sheldon *et al* 2012) for reasons that are poorly understood but are likely to be at least partly due to hunting along the migration flyway. Fieldwork in Kazakhstan (and counts in Turkey and elsewhere in the Middle East) has shown the population to be substantially larger than previously thought, but recent demographic studies have found low adult survival, possibly largely driven by hunting pressure along the migration routes and wintering grounds (Sheldon *et al* 2013). The species has been the subject of an intensive research and conservation programme by BirdLife International, RSPB (UK), ACBK (Kazakhstan) and others since 2004 where significant knowledge has been gained of movements from satellite tracking data.

The breeding range is now limited almost entirely to the steppe zone of Kazakhstan with small numbers also breeding in southern Russia. Some of the population migrates through southwest Russia, into Turkey and through the Middle East region, leaving their breeding grounds August–September and passing through Arabia mostly September–October. These birds spend the winter in northeast Africa (mainly Sudan) with small numbers in the Arabian peninsula in Saudi Arabia, United Arab Emirates and Oman. In spring, birds migrate from their wintering grounds through the Middle East during March or early April and arrive back on their breeding grounds mid April–early May (Wiersma *et al* 2017). There is also an eastern flyway where, since 2010, several Sociable Lapwings fitted with satellite transmitters on the breeding grounds in Kazakhstan have been tracked on southward migration to wintering grounds in India and Pakistan. They stopover at an area that straddles the border between southeastern Turkmenistan and



Plate 1. Forty-six Sociable Lapwings *Vanellus gregarius*, near Tabuk, Tabuk province, Saudi Arabia, 20 November 2015. Largest flock recorded in Saudi Arabia. © Viv Wilson



Plate 2. Sociable Lapwing *Vanellus gregarius*, near Sabya, Jizan province, southwest Saudi Arabia, 27 January 2013. This bird was using a stubble field next to other large green pivot irrigation fields. © Phil Roberts



Plate 3. Sociable Lapwing *Vanellus gregarius*, Haradh, Eastern province, Saudi Arabia, 5 February 2016. It is using a ploughed field, apparently the favourite habitat in eastern Saudi Arabia. © Jem Babbington

southern Uzbekistan, and stay for prolonged periods. Coordinated counts in September and October 2015 on either side of that border, recorded 4225 birds in Uzbekistan and 3675 in Turkmenistan representing the highest numbers of the species recorded anywhere since the 19th century. Movements of birds between the two countries were hard to quantify because of the restricted border zone, but the total number of birds using the area was estimated at between 6000 and 8000, possibly representing the species' entire eastern flyway population and perhaps half of its global population (Donald *et al* 2016).

It has been known for many years that Sociable Lapwings move through Saudi Arabia on migration in both autumn and spring and was possibly a winter visitor there, but the winter location of birds was poorly known due to a limited amount of data. Historically the species has been recorded north of Jeddah near the Red sea coast, with other records from north of Yanbu, one near the National Wildlife Research Center in Taif (Kamp *in litt* 2012), one record near Riyadh and one near Haradh (Eastern province). Recently it has been noted from satellite tracking data that Sociable Lapwings winter in very small numbers in Saudi Arabia with all records referring to birds in the north and west. A satellite-tagged bird was recorded on 20 November 2010 in pivot irrigation fields west of Al Jawf. Another satellite-tagged bird from central Kazakhstan was present a few kilometres north of Al Qa'arah, in the west of Saudi Arabia, in winter 2011 where it appeared to be using irrigated fields with a flock of ten seen nearby 15 November 2012. An adult female was tagged 4 June 2013 at Izendi, near Korgalzhyn in central Kazakhstan that then moved to an area of irrigated, agricultural pivot fields near Tabuk by 28 October



Plate 4. Sociable Lapwing *Vanellus gregarius*, Haradh, Eastern province, Saudi Arabia, 13 January 2017. © Jem Babbington

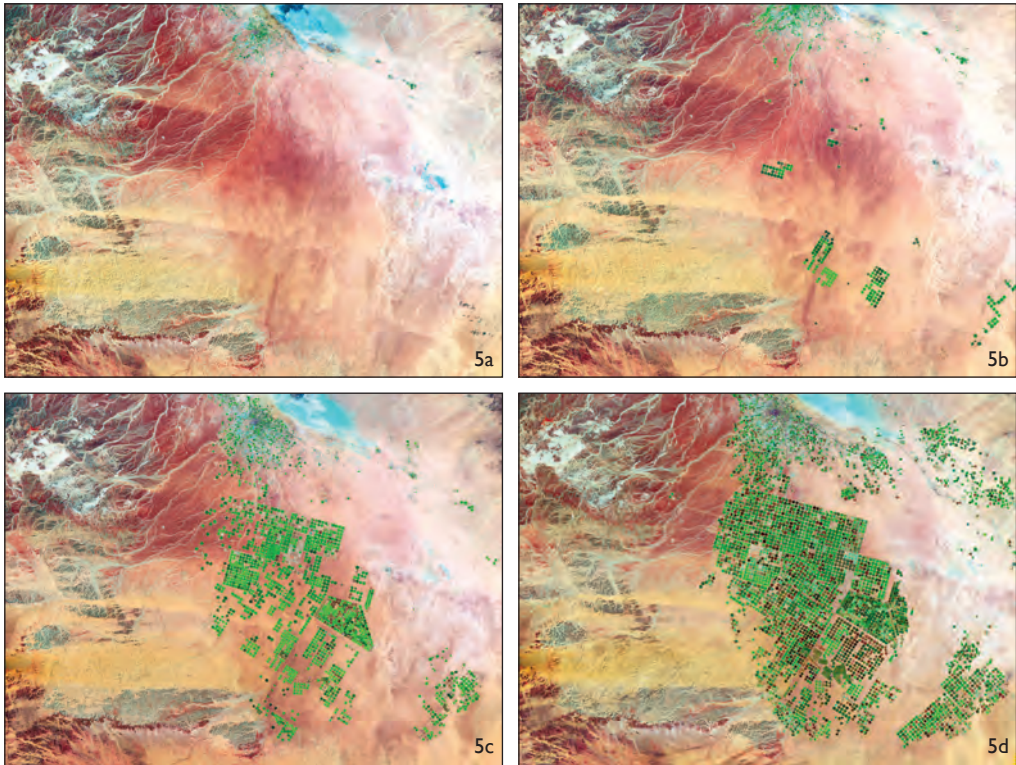


Plate 5a–d. Example of the increase in pivot irrigation fields in northwest Saudi Arabia, the favoured wintering areas for Sociable Lapwings *Vanellus gregarius*. NASA Earth Observatory images using Landsat data of Wadi As-Sirhan basin. 5a: 5 February 1987, 5b: 24 February 1991, 5c: 12 March 2000 and 5d: 17 January 2012.

2013 remaining to March 2014. In early November 2015 there were three birds consistently present in northern Saudi Arabia, all at different locations, west of Tabuk, west of Al Jawf and west of Tayma respectively. Interestingly, all of the locations are within areas of irrigated pivot fields, which presumably provide good foraging habitat compared to surrounding desert. During survey work looking for the satellite-tagged birds, seventeen Sociable Lapwings were located in pivot fields c30 km west of Tayma 13 November 2015 and twenty-four more in ploughed pivot fields near Tabuk 15 November (Sheldon *et al* 2015). A flock of 46 birds was located in the same area of pivot fields near Tabuk 20–27 November 2015, by a local birdwatcher who had no knowledge of the records a week before (Plate 1). A single bird was recorded in a similar area of Tabuk 28 December 2016.

Birds have historically been mapped wintering in the west of Saudi Arabia south of Jeddah but were thought to no longer winter there. This appears not to be the case, as a flock of 35 birds was observed in southwest Saudi Arabia in fields north of Jizan 14 February 2013 with seven birds in stubble fields 25 km further north, near Sabya, 19 November with six there 22 November 2013 (Plate 2). North of Jeddah at KAUST university several birds occurred 27 January–15 February 2011, a single bird 27 November 2011–20 January 2012 and a single bird 21 November 2016–23 February 2017. These birds at KAUST used an area of grassy fields and open sandy areas with plenty of vegetation, not pivot irrigation fields (Brian James pers comm). Records of the species from the Eastern province of Saudi Arabia are very rare with the historical record of an adult Haradh farm 25 February 1982 the only occurrence until we found sixteen birds associating with a large flock of 425 Northern Lapwings *Vanellus vanellus* at Haradh on 5 February 2016 (Plate 3). The Sociable Lapwing

flock consisted of adult birds in both full summer and winter plumage and at least one, apparent, second calendar year (first winter) bird, but they were very timid and would not allow close observation. The date of these birds suggested they were wintering but we needed confirmation so went back to the same area 13 January 2017 and found seven birds (Plate 4). Another visit to the same area on 3 February 2017 confirmed at least five birds were still present, both times associated with large numbers of up to 350 Northern Lapwings. Interestingly, the birds seen in both 2016 and 2017 were in ploughed fields with those in 2017 following a tractor and feeding in freshly ploughed areas, presumably searching for soil invertebrates, although thousands of flies were also present in Haradh during our visits. The 22 birds west of Tabuk mentioned in Sheldon *et al* (2015) were also seen following a tractor in a field that was being freshly ploughed, a behaviour typical of many vanellids including Northern Lapwing (Shrubb 2007). The dates of the Haradh birds were much too early for passage migrants and confirmed this area as a new wintering location for the species, a very surprising occurrence as the species was until then treated as a vagrant to Eastern province (Bundy *et al* 1989).

Saudi Arabia has not been systematically surveyed for wintering Sociable Lapwings, but almost all records of wintering birds have been from pivot irrigation fields or cultivated habitat. They have occurred in cropped fields such as winter cereals and early stages of alfalfa, habitat types typical for a number of vanellid species, and are probably attracted as they are well watered and are a good source of invertebrates including insects. As a result of our findings, all extensive areas of pivot fields should be checked in winter, November–February, including those that as far as we are aware have never been surveyed such as Wadi Dewasar in the southwest and those around Al Kharj in central Saudi Arabia. The best fields to look at appear to be freshly ploughed or those in the early stages of crop growth, less than 10 cm in height, as they appear to be a favoured habitat and are easy to search with a telescope to see if birds are present.

The increase in recorded wintering birds in Saudi Arabia is perhaps not surprising, as there has been an increase of interest in the species as well as the number of pivot irrigation fields having increased enormously over the last thirty years (Plate 5). These fields were created by water-liberal irrigation practices in the late 1970s and have subsequently led to problems of water scarcity. Landowners were allowed to freely extract water from aquifers without limitation to maintain irrigated fields in the desert, but recent action by the Saudi Arabian government to end domestic wheat production and banning the growing of other water-intensive crops like alfalfa, which was used primarily for animal fodder, was instigated in 2015 (DeNicola *et al* 2015). Given the increase in irrigated fields in parts of Saudi Arabia and elsewhere in the Middle East, it is interesting to speculate if this has caused a change in the migratory behaviour of Sociable Lapwings. However, there are no historical data to prove this, and we also know from the ongoing satellite-tagging work that some individuals do continue to migrate further south to countries such as Sudan. What is clear is that Saudi Arabia is a more important wintering location than previously thought, with birds wintering in the north, east and west of the Kingdom.

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