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Range Extension of the Barn Owl *Tyto alba* in Iran

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Abstract: This paper summarizes the distribution of the Barn Owl in Iran since 1990. Approximately 74 birds have been recorded from 28 localities since 1990, whereas there were only three records of the species in Iran in the 1970s (from two localities in Khuzestan Province and one locality in Bushehr Province). It is concluded that there has been a major expansion in the range of the species in Iran in recent decades. This paper also documents the discovery of a pair of Barn Owls nesting at Kapour-Chal, near Anzali, Gilan Province, in northern Iran in the summer of 2007.

Keywords: Barn Owl, *Tyto alba*, distribution, range extension, conservation, Iran.

در این مقاله خلاصه‌ای از پراکنش جغد انباری در ایران مشتمل بر ثبت ۷۴ پرنده از ۲۸ نقطه کشور از سال ۱۹۹۰ ارائه می‌شود، درحالی که تنها سه رکورد از این گونه در ایران در دهه ۱۹۷۰ (دو مکان در استان خوزستان و یکی در استان بوشهر) موجود بود. بر اساس نتایج این بررسی، نتیجه‌گیری می‌شود که این گونه در دهه اخیر گسترش پراکنش وسیعی در ایران داشته است. این مقاله همچنین کشف یک جفت دارای آشیانه جغد انباری را در کپورچال، انزلی، استان گیلان را به ثبت رساند.

INTRODUCTION

The distribution of the Barn Owl *Tyto alba* in Iran is poorly known. According to Vaurie (1965) and Hübner & Etchécopar (1970), the form *erlangeri* occurs from the Iraqi border eastwards through the Zagros Mountains to Fars Province, and west in the Zagros to at least Lorestan. Capito (1931) reported on a specimen taken at Mishun, Fars, in spring 1925. Vaurie (1965) drew attention to a specimen collected at Gasan Kuli at the mouth of the Atrek River in Turkmenistan close to the Iranian borders in October 1942, and concluded that "the range of the Barn Owl in Iran is probably more extensive than our present knowledge indicates".

Extensive avifaunal surveys throughout Iran by personnel of the Department of the Environment (DOE) in the 1970s produced only three records, all in the southwest of the country: a bird seen in Dez Wildlife Refuge near Haft Tappeh, Khuzestan, on 15 May 1971

(D.A. Scott pers. obs.); one found dead in ruins at Choqa-Zanbil near the Dez River, Khuzestan, on 25 March 1975 (D. Howell & P. Joslin *in litt.* to D.A. Scott); and two or three seen 2–3 km north of Bushehr in January 1977 (B. Darehshoori *in litt.* to D.A. Scott).

Khaleghizadeh & Sehhati (2004) mention a record of a Barn Owl at Heart in Yazd Province; Moghadas & Rabiee (2006) describe the first record of the species north of the Alburz Mountains in northern Iran; Sehhatisabet *et al.* (2006) document records of the species from Shahriyar, Tehran Province, and Zaviyeh, Markazi Province; and Bakhtiari & Tohidifar (2007) report on two Barn Owls in the Demavand area, Tehran Province.

METHODS

This paper summarizes the distribution of the Barn Owl in Iran, based on the published records and a number of unpublished records

collected by the authors since 1990. These records are listed in Table 1. The paper also describes the discovery of the nest of a pair of Barn Owls near Anzali Mordab, Gilan Province, in northern Iran in 2007, and reports on the conservation of this owl species in Iran.

RESULTS

There have been a number of reports of Barn Owls from various parts of the country in recent years, indicating that the species is much more widely distributed in Iran than was formerly supposed, *e.g.* by Scott *et al.* (1975) and Mansoori (2001). The location of all confirmed records of Barn Owls in Iran since 1990 is shown in Figure 1. The recent records come from 12 provinces of Iran.

New records from Gilan

The first fully-documented observation of a Barn Owl in the south Caspian lowlands was on 5 April 2005 when a bird was found in a rice-field at Dolatabad, 15 km north of Sari, Mazandaran (Moghadas & Rabiee 2006). The bird was captured, photographed and subsequently released in Dasht-e Naz Wildlife Refuge, 15 km northeast of Sari. However, it has now become apparent that the species is not uncommon in the Anzali area in Gilan Province in the southwest Caspian. In August 2007, A.O. and M.E.S. received a report that a pair of Barn Owls was breeding in a barn at a small cement-block factory at Ali-Abad village, 2 km from Kapour-Chal, Gilan ($37^{\circ}32'36''\text{N}$, $49^{\circ}14'59''\text{E}$).

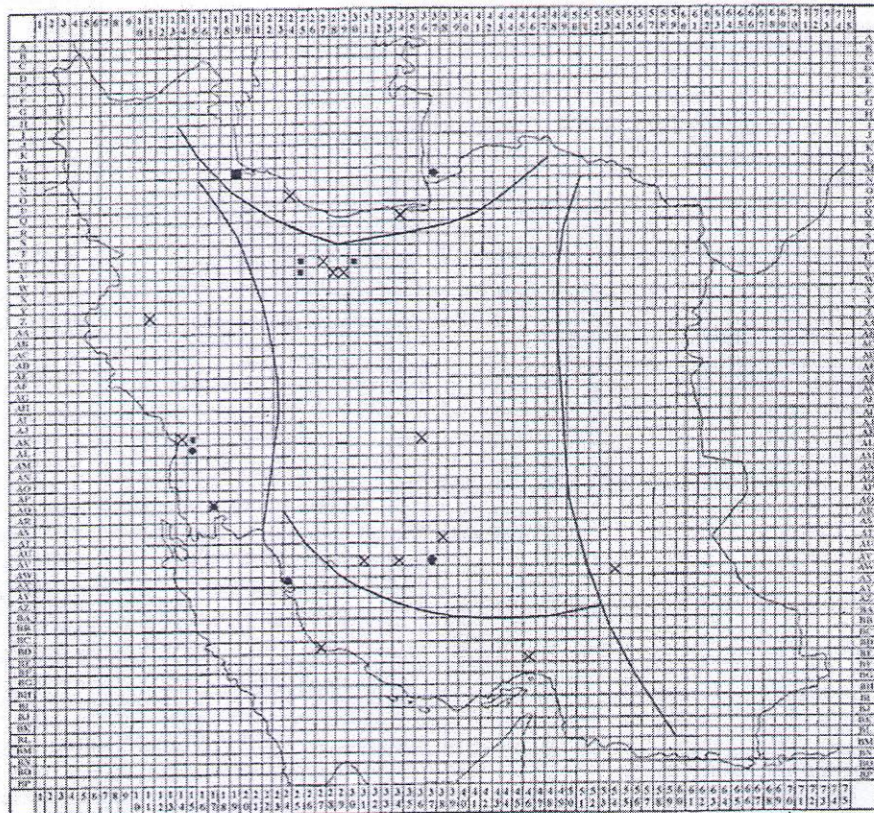


Figure 1. Distribution of all records of the Barn Owl in Iran in the 1970s and since 1990, plotted on a 25 km x 25 km grid. The three records from the 1970s are indicated by solid circles. Confirmed breeding records since 1990 are indicated by large solid black squares and probable breeding records by small solid black squares. Other records since 1990 are indicated by crosses.

Table 1. Records of Barn Owls in Iran since 1990.

Province	Locality	Date	Number of birds	Source
Mazandaran	In a rice-field at Dolatabad, 15 km north of Sari	5 Apr. 2005	One captured and released	Moghadas & Rabiee (2006)
Gilan	one	Feb. 1998	One captured and released	M. Yusefi (pers. comm.)
Gilan	around Kapour-Chal, Anzali	Nov. 1999	Two captured and dead	M. Yusefi (pers. comm.)
Gilan	around Kapour-Chal, Anzali	mid-Jan. 2001	One captured and released	M. Yusefi (pers. comm.)
Gilan	around Kapour-Chal, Anzali	Feb. 2004	One captured and dead	M. Yusefi (pers. comm.)
Gilan	around Kapour-Chal, Anzali	Dec. 2005	Two captured and dead	M. Yusefi (pers. comm.)
Gilan	around Kapour-Chal, Anzali	Nov. 2006	Two captured and dead	M. Yusefi (pers. comm.)
Gilan	around Kapour-Chal, Anzali	Mar. 2007	One captured and dead	M. Yusefi (pers. comm.)
Gilan	Ali-Abad village, 2 km from Kapour-Chal, 2.5 km northwest of the western part of Anzali wetland	Aug. 2007	One adult killed by car and one juvenile dead	A. Osaei & M.E. Sehhatisabet (see results)
Gilan	around Kapour-Chal, Anzali	late Dec. 2007	Four captured and dead	M. Yusefi (pers. comm.)
Gilan	around Chaboksar	Winter 2007	One	A. Ashoori (pers. comm.)
Tehran	Absard, Damavand	summer 2000	Two in a barn	Bakhtiari & Tohidifar (2007)
Tehran	around Tehran	mid-Sep. 2005	Two	P. Bakhtiari (pers. comm.)
Tehran	1 km S of Emamzadeh Davood, north of Tehran city	Jul. 1993	One killed by a car	A. Naderi (pers. comm.)
Tehran	Tehran city	early autumn 1996	One crashed into the building of the Ministry of Agriculture and was then released	H. Amini (pers. comm.)
Tehran	Moulawi pet shop in Tehran city	mid-May 2007	Seven specimens offered for sale (Fig. 2); probably captured in the Varamin area	A. Musavi (pers. comm.)
Tehran	Khani-Abad district, south of Tehran city	summer 2003	One captured and released	P. Bakhtiari (pers. comm.)
Tehran	2 km from Mobarakieyeh Game Guard Station, north of Kavir National Park	winter 2007	One	A. Osaei (pers. obs.)
Tehran	around the Caravansaray near Deh Namak, near Varamin	early summer 2003	One	P. Bakhtiari (pers. comm.)
Tehran	Near Sharif-Abad village, Varamin	late Jan. 2007	One	A. Musavi (pers. comm.)
Tehran	Pishva, Varamin	2 Mar. 2007	Two	A. Musavi (pers. comm.)
Tehran	Pishva, Varamin	6 Sep. 2007	One	A. Osaei (pers. obs.)
Tehran	south of Shahriyar city	Apr. 2001	Two	Sehhatisabet <i>et al.</i> (2006)
Tehran	around Shahriyar city	late spring 2006	One	P. Bakhtiari (pers. comm.)
Tehran	Shokr-Abad, Varamin	early Feb. 2007	One dead	M.A. Adibi (pers. comm.)
Semnan	Lajran village, W Garmsar	21 Jan. 2008	Two dead	M.A. Adibi (pers. comm.)
Markazi	Zaviyeh City	May 2002	One	Sehhatisabet <i>et al.</i> (2006)
Kermanshah	Rijab, 2 km southwest of Kermanshah	9 Apr. 2001	Two at night	A. Osaei (pers. obs.)
Khuzestan	Karkheh Protected Area	three times around 1990	One	B. Behrouzi-Rad (pers. comm.)

Province	Locality	Date	Number of birds	Source
Khuzestan	Shush Castle, Shush	autumn 2007	Two	M.R. Rokni (pers. comm.)
Khuzestan	Haft-Tappeh, Shush	21 May 2005	One came into the museum	M.R. Rokni (pers. comm.)
Khuzestan	Haft-Tappeh, Shush	many times in autumn 2007	Two	M.R. Rokni (pers. comm.)
Khuzestan	Choqa-Zanbil (Tchoga Zanbil), Shushtar	late Dec. 2007	Feather of Barn Owl	M.R. Rokni (pers. comm.)
Khuzestan	Shadegan	early 1990s	Many times	M.R. Rokni (pers. comm.)
Bushehr	Borjak, Mond	16 Jun. 2006	A juvenile sitting on a wire; photographed	M. Jamadi (pers. comm.)
Bushehr	Core zone of Mond Protected Area	summer 2006	At least seven birds (three of them were found dead)	M. Jamadi (pers. comm.)
Yazd	Meibod	early autumn 2001	A mounted specimen in a private house	P. Bakhtiari (pers. comm.)
Yazd	Harat	27 Apr. 2003	One captured and released (Fig. 3)	(Khaleghizadeh & Sehhati 2004)
Fars	Bahram-e Gur P.A.	late Sep. 2006	One	A. Ghoddousi (pers. comm.)
Fars	Shiraz city	Sep. 2007	An injured individual hit by a car; died after surgery in Vet. Dep. of Shiraz University	A. Ghoddousi (pers. comm.)
Fars	around Kharameh, c. 70 km east of Shiraz	early summer 1991	One	H. Farhadpour (pers. comm.)
Hormozgan	Issin area north of Bandar Abbas	summer 2003	One dead; it is probably this specimen that is preserved in Hormozgan Provincial Office of the DOE	B. Musavi (pers. comm.)
Kerman	Bam	Mar. 2006	A dead bird in a date garden	B. Musavi (pers. comm.)

They visited the site on 23 August and found an abandoned nest of a Barn Owl. The barn was in an area of grassland with some woodland nearby, about 2.5 km northwest of the western part of Anzali wetland (Table 1). The nest was situated on the ground under a table in a room measuring 6×7×5 m, and was difficult of access by humans. It was lined with pieces of old newspaper. One of the adults from this nest was killed by a car on 1 August 2007, and when the nest was inspected on 23 August, it was found to contain only a single dead nestling which had apparently died some days after the death of one of its parents. Local people stated that they had seen an adult Barn Owl in the area on 21 August.

According to M. Yusefi (pers. comm.), a number of Barn Owls have been captured in flight nets set by waterbird hunters around Kapour-Chal, Anzali, during the last 10 years (Table 1). In an area located to the west of Anzali wetland, local waterbird hunters have been catching four or five Barn Owls in their nets every year since the winter of 2001/2002. One dead Barn Owl from this area was deposited at Gilan Provincial Office of the

Department of the Environment in 2004 (A. Osaci pers. obs.).

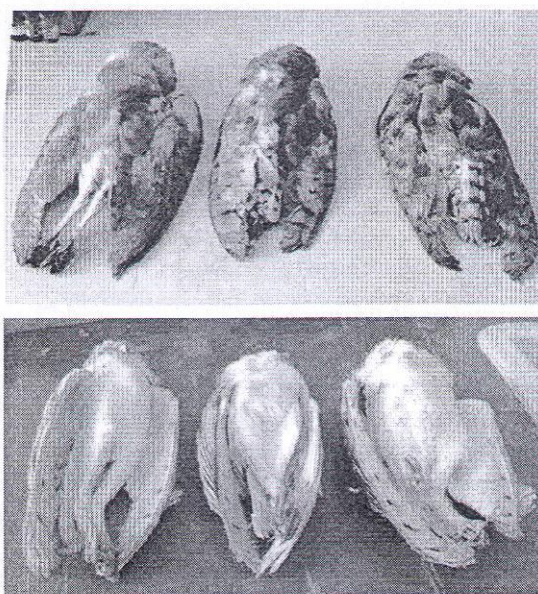


Figure 2. Comparison of plumage of three individuals obtained in Tehran area, © A. Khaleghizadeh.

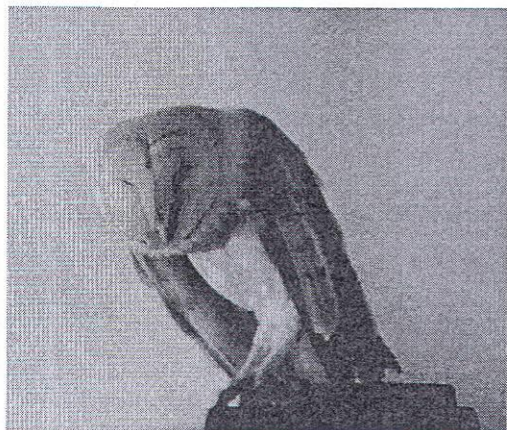


Figure 3. Barn Owl captured at Harat in Yazd Province on 27 Apr. 2003, © M.E. Sehhatiasabet.

DISCUSSION

The Barn Owl has now been recorded from 26 localities in 12 provinces since 1990. This indicates that there has been a major expansion in the range of the species in Iran (Fig. 1). Although definite proof of breeding has only been obtained in Gilan, there is now evidence to suggest that the Barn Owl is a fairly widespread breeding species in northern and western Iran from the southwest Caspian region and Tehran area south to Fars and Bushehr. This situation contrasts markedly with the status of the Barn Owl in Iran prior to the 1980s, when it appears to have been a very scarce bird, confined to the southwest of the country. We believe that the Barn Owl has expanded its range considerably in the last ten years. For instance, at some sites in Fars Province where J. Obuch (pers. comm.) did not find any Barn Owl pellets in 1996 and 1998, there were many pellets in 2000 and 2002. P. Bakhtiari (pers. comm.) believes that Barn Owls regularly roost inside traditional wells around Shahriyar instead of in barns as in Europe. He reports having found a Barn Owl in a well in Zaviyeh near Shahriyar, northeast Markazi Province, in May 2002. Sehhatiasabet *et al.* (2006) mention two individuals found in holes in traditional wells in southern Shahriyar in April 2001. Local people from Heart in Yazd Province reported that Barn Owls were using traditional wells as nesting sites in the early 1990s.

There can be little doubt that the great increase in records of Barn Owls in recent years, particularly in Gilan Province and the Tehran area, reflects a major expansion in the range of the species in Iran, presumably from neighbouring countries to the west. While the recent records in western and southern Iran might be explained by an increase in the number of observers and better reporting in these regions, this is unlikely to be the case in the Caspian region and Tehran area – two of the best known areas ornithologically in Iran. In the late 1960s and 1970s, ornithologists from the Department of the Environment regularly visited the Anzali wetland at night to trap ducks for ringing, and yet never saw or heard mention of Barn Owls in this area (D.A. Scott pers. comm.). Similarly, no Barn Owls were encountered by Department ornithologists during numerous nights of wader netting in the 1970s at a small wetland between Tehran city and Varamin (D.A. Scott pers. comm.) – an area which now supports a relatively large Barn Owl population.

The reasons for the recent expansion in the range of the Barn Owl in Iran are unknown. It is possible that the expansion in some areas is linked to an increase in the extent of irrigated agriculture and concomitant increase in populations of shrews and small rodents, but this is unlikely to be the case in the southwest Caspian region where no such change in agriculture has occurred. Barn Owls, like other owls, are still widely persecuted in Iran because they are generally considered to be inauspicious birds in traditional Iranian culture. It is possible, therefore, that very high levels of owl persecution in the past have prevented Barn Owls from occurring in large parts of Iran that were otherwise suitable. It will be very interesting to see if this range expansion continues, as there are large areas of Iran still without Barn Owls that would appear to be suitable for this cosmopolitan species.

The Barn Owl is a resident breeder in the Middle East with a wide but somewhat fragmented distribution from northern Turkey to southern Yemen (Porter *et al.* 1996). In areas adjacent to Iran, there is at least one breeding record of the Barn Owl in Diyarbakır (Birmil Province) in eastern Turkey. There are also one or two winter records (in December) of Barn Owls in the campus of Dicle University in

Diyarbakır (R. Karakaş pers. comm.). In Iraq, there are many historical and also some recent observations of Barn Owls from various parts of the country from the north to the extreme south (M. Salim pers. comm.). There are no reports of the Barn Owl from Armenia (V. Ananian pers. comm.) or Uzbekistan (E. Shernazarov pers. comm.), but it is listed as a year-round resident and breeding bird in the checklist of the birds of Georgia (available on www.gccw.org). Farafontov & Bahtadze (2003) have reported on the occurrence of the species in Andropovskiy District of Stavropol Territory north of the Central Caucasus, where a dead adult male and two dead chicks were found in July 2001.

In Iraq, it appears that many of the Barn Owls lay two clutches of eggs in each breeding season, as some nests have been found in April while others have been found in July (M. Salim pers. comm.). It also seems that Barn Owls undertake some local movements within Iran, as they appear in some areas only at a specific time of the year, but these local movements have not been studied (M. Salim pers. comm.). It is possible that the Barn Owl shows similar behaviour in Iran.

Priorities for conservation

About half of the recent records of Barn Owls in Iran have been of dead birds or birds that were captured and subsequently died (Fig. 4). In the absence of any special surveys to locate Barn Owls, it is inevitable that many of the records of this nocturnal species will be of birds found dead or dying. Nevertheless, the very high incidence of dead/injured birds suggests that there is a high level of persecution of this owl in Iran. Many Barn Owls have been captured inadvertently in flight nets set by waterbird hunters around Anzali wetland in Gilan, and most of these have been killed or died in captivity (M. Yusefi pers. comm.). We do not believe that there has been any significant reduction in the level of persecution of the Barn Owl in Iran in recent years, given that there has been a doubling in the human population in the last 30 years. However, there has been an increase in efforts to conserve bird populations in recent years as well as increased urbanization of the human population, and these factors may have resulted in some reduction in the level of persecution in some areas. It is to be

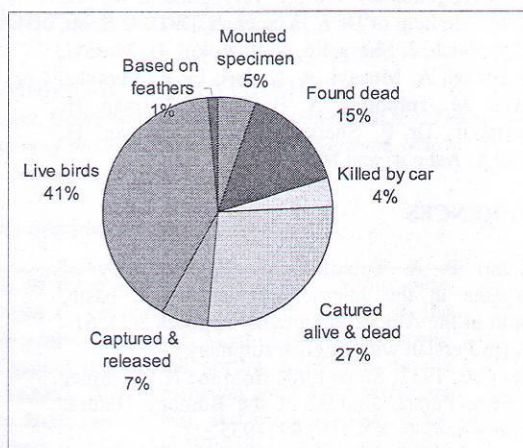


Figure 4. Circumstances of finding of 74 Barn Owls recorded in Iran since 1990.

hoped that as the old superstitions die out and the general public become increasingly aware of the need to conserve wildlife, the level of persecution will fall to the extent that Barn Owls can breed successfully in close proximity to humans, and can thereby expand into new areas.

Efforts should now be made through the Islamic Republic of Iran Broadcasting (IRIB) Organization and other media to draw attention to the value of Barn Owls, and the need to conserve them. It is particularly important to teach farmers and villagers about the ecological importance of Barn Owls, especially in controlling rodents which can be harmful pests on agriculture, since it is these people who will have the greatest impact in owl conservation. The erection of nest boxes for Barn Owls should be considered in some areas, and information on the construction and mounting of nest boxes could be provided in schools for students and also for farmers. An increase in the fines for killing or capturing Barn Owls might help to reduce the high levels of persecution, and a complete ban on the sale of live Barn Owls should be rigidly enforced. Finally, there is a need to evaluate the possible effects of environmental pollution on Barn Owls in Iran, including an assessment of the levels of total mercury in the owls' feathers, as carried out by Dahmardeh *et al.* (2007) on other species of owls in Iran.

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