

Distribution of the Steppe Eagle in the Indian Subcontinent: Review of Records from 1882 to 2013 AD

РАСПРОСТРАНЕНИЕ СТЕПНОГО ОРЛА НА ИНДИЙСКОМ СУБКОНТИНЕНТЕ: ОБЗОР С 1882 ПО 2013 ГОДЫ

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Резюме

Сообщения о распространении степного орла (*Aquila nipalensis*) на зимовках и миграциях через Индийский субконтинент в восточной литературе встречаются редко. Чтобы получить целостное представление о статусе этого орла, областях его распространения, путях миграции, высотной поясности его мест обитания, предпочтений при выборе ареала и состояния популяции, мы проанализировали имеющуюся литературу и подтвержденные фотографические наблюдения, касающиеся встреч степного орла на полуострове Индостан за последние 131 год, с 1882 по 2013 гг. За изученный период всего 16 879 степных орлов было отмечено в 9 странах полуострова Индостан: в Индии, Афганистане, Пакистане, Непале, Тибете, Бутане, Сиккиме, Мьянме и Бангладеш. Он встречался в 26 охраняемых территориях и был отмечен в таких природных зонах, как альпийские луга и лес, скалы в Гималаях, равнины на реке Ганг, в прибрежных полосах, пустынях, полупустынях, пастбищах, сухих лиственных лесах, на заболоченных территориях, а также на ирригуемых полях и на городских окраинах. Скопления орлов наблюдались около помоек и мест захоронений. Мы отмечаем распространение степного орла в южном и восточном направлениях в Индии, по сравнению с ранними наблюдениями. Степной орёл распространён по всей Индии, за исключением островов в Аравийском море и Бенгальском заливе.

Ключевые слова: степной орёл, *Aquila nipalensis*, Индия.

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Abstract

The reports of distribution of the Steppe Eagle (*Aquila nipalensis*) in the Indian subcontinent during wintering migrations are scattered in the oriental literature. To obtain a holistic understanding of its status, distributional pattern, migratory pathway, altitudinal range, habitat choice and populations, we analyzed the published literature and the confirmed photographic records from the Indian subcontinent during 131 years from 1882 to 2013. In all, 76,879 Steppe Eagles were reported from 9 countries in the Indian subcontinent: India, Afghanistan, Pakistan, Nepal, Tibet, Bhutan, Sikkim, Myanmar and Bangladesh. It occurred in 26 Protected Areas and was recorded in habitats such as alpine meadows and forests, cliffs in Himalayas, Gangetic plains, riverside habitat, desert, semiarid regions, grassland, dry deciduous forest, wetland, irrigated cultivation and urban fringes. The eagles congregated around garbage and carrion dumps. We report a southward and eastward extension of their distribution in India as compared to the earlier records. They are distributed in entire India except in oceanic islands in the Arabian Sea and Bay of Bengal.

Keywords: Steppe Eagle, *Aquila nipalensis*, Indian Subcontinent.

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Введение

Степной орёл (*Aquila nipalensis* Hodgson, 1833, Falconiformes: Accipitridae) является зимнем проходным мигрантом и регулярным зимним посетителем индийского субконтинента (Ali, Ripley, 2001). Об этом виде на Индийском субконтиненте имеется лишь скудная и разрозненная информация. В этом сообщении, помимо информации о распространении степного орла, мы представляем целостные данные о статусе вида, высотном диапазоне, выборе местообитаний, популяционной и возрастной структуре, а также сезонности появления этого орла на Индийском субконтиненте.

Методы

Доклады о распространении степного орла разрозненны и случайны. В связи

Introduction

The Steppe Eagle (*Aquila nipalensis* Hodgson, 1833, Falconiformes: Accipitridae) is a winter passage migrant and regular winter visitor to the Indian subcontinent (Ali, Ripley, 2001). Scanty and scattered information is available on this species from the Indian subcontinent. In this communication besides the distribution of the Steppe Eagle, we present the holistic data on the status, altitudinal range, habitat choice, populations, age pattern and seasonality of occurrence of this eagle in the Indian Subcontinent.

Methods

The reports of distribution of the Steppe Eagle are scattered. Hence, in order to get a holistic view, we referred various newslet-



Степной орёл (*Aquila nipalensis*).

Фото К. Гадже, Фонд Эла.

Steppe eagle (*Aquila nipalensis*).

Photo by K. Ghadge, Ela Foundation.

с этим, чтобы получить целостное представление, мы обращались в различные бюллетени, журналы, перечни, отчёты о состоянии, отчёты об обследованиях и инвентаризации по Индийскому субконтиненту, особенно по девяти странам – Индии, Афганистану, Пакистану, Непалу, Тибету, Бутану, Сиккиму, Мьянме и Бангладеш – за период с 1882 по 2013 гг. Кроме того, мы проанализировали имеющуюся литературу. Мы также рассмотрели подтверждённые фотографиями сведения, опубликованные на различных орнитологических веб-сайтах. Были учтены только те записи, где степной орёл был подтверждён по фотографиям и была указана местность наблюдения.

Результаты и обсуждения

Сводные данные из записей о степном орле на Индийском субконтиненте представлены в таблице 1. Всего 120 записей о встречах степного орла были из Индии и 24 записи – из других стран Индийского субконтинента. Эти записи из 9 стран показывают, что всего 76935 степных орлов были встречены на субконтиненте за 131 год, с 1882 по 2013 гг. Зимующие степные орлы регистрировались с сентября по май на обоих путях пролёта – и туда, и обратно, а также во время зимнего пребывания. Было сообщено из Непала, что молодые и незрелые орлы (56 %) преобладают над взрослыми (44 %) (De Roder, 1989), в то время как в Пуне (Индия) отмечено, что взрослые ($n=93$; 69 %) были обычнее молодых ($n=41$; 31 %) (Pande et al., 2010).

Орлы держались в группах птиц и только из своего вида, и совместно с другими

ters, journals, checklists, status reports, survey reports and inventories from the Indian Subcontinent, particularly from 9 countries, India, Afghanistan, Pakistan, Nepal, Tibet, Bhutan, Sikkim, Myanmar and Bangladesh during 1882 to 2013. Further, we compiled and analyzed the available published literature. We also examined the confirmed photographic records as published in various ornithological websites from India. Only those records were accepted where the identification of Steppe Eagle could be confirmed from the hosted photographs and where the locality of observation was mentioned by the photographer.

Results and Discussion

The compilation of the distributional records of Steppe Eagle from the Indian Subcontinent is presented in table 1. Total of 120 records of the occurrence of Steppe Eagle were from India, while 24 records were from the other countries in the Indian Subcontinent. The distributional records of Steppe Eagles *Aquila nipalensis* from 9 countries in the Indian subcontinent revealed that in all, 76,935 Steppe Eagles were reported from the Indian subcontinent spanning 131 years from 1882 to 2013 AD. The wintering Steppe Eagles were reported from September to May, both in onward and return migration and during their winter sojourn. In Nepal, it was reported that juvenile and immature eagles (56 %) dominated over adults (44 %) (De Roder, 1989), whereas in Pune, India, it was observed that adults ($n=93$; 69 %) were commoner than the young ($n=41$; 31 %) (Pande et al., 2010).

The eagles were seen as single species or in association with other raptors. Within the same region where the Steppe Eagles were sighted, up to 59 raptor species have been recorded indicating that such regions were suitable raptor habitats. The altitudinal distribution within the Indian subcontinent ranged from 0 m in Gujarat and Kerala to 4500 m asl in Arunachal Pradesh. In India, the Steppe Eagle occurred in 27 Protected Areas (Reserves, Wild Life Sanctuaries and National Parks).

The analysis of distributional records mentioned in the Table 1 show that it occurs in a variety of habitats such as alpine mead-

Табл. 1. Записи о степном орле (*Aquila nipalensis*) на Индийском субконтиненте (1882–2013). Распределение записей из Индии (приводятся по административным регионам) и других стран Индийского субконтинента. В таблице также указаны год наблюдения, высота / местообитание, население, количество других видов хищных птиц из региона и источник информации.

Table 1. Records of Steppe Eagle (*Aquila nipalensis*) in the Indian Subcontinent (1882–2013). The distributional records are mentioned for India (division and state wise) and for other countries of the Indian subcontinent. The table also mentions the year of observation, altitude / habitat, population, number of other raptor species from the region and the source.

Locality Локализация	Year / Год	Altitude, Habitat Высота над уровнем моря, местообитание	Population Статус и численность	Number of other raptors Число других хищников	Source Источник	
1	2	3	4	5	6	7
INDIA						
NORT-EAST INDIA						
1 Arunachal Pradesh						
Namdapha NP (27°23'N, 96°15'E)	Nov 2006	4500 m, M, F	1	7 Sp.	Srinivasan et al., 2010	
2 Manipur						
Loktak (23°49'–25°42'N 93°00'–94°45'E)	Oct–March 1999–2000	765 m, W, L	1	5 Sp.	Choudhary, 2009	
3 Mizoram						
Saiha (21°58'N–24°35'N, 91°15'E–93°29'E)	Feb–March 2009	1226 m, F	1	1 Sp.	Ved & John, 2011	
4 Assam						
Kaziranga NP (26°35'–26°45'N 93°05'–93°40'E)	1993–1999	55–75 m, W, F	Rare	59 Sp.	Barua & Sharma, 1999	
Nameri NP (26°50'–27°02'N 92°38'–93°00'E)	1996–2003	79–1500 m, M, F	Rare	41 Sp.	Barua & Sharma, 2005	
Guwahati	Feb 2013	54 m, U, G	1		Dutt, 2013	
5 Meghalaya						
Meghalaya 25°47'–26°10'N 89°45'–92°47'E	1990–1994	150–1961 m	Rare	8 Sp.	Majumdar, 1995	
EASTERN INDIA						
6 Orissa						
S. Orissa (22°N)	-	-	Wanderer	-	Ali & Ripley, 2001	
7 West Bengal						
West Bengal	1985–1991	-	Common	20 Sp.	Majumdar et al., 1992	
West Bengal	-	-	Common	-	Naoroji, 2006	
NORTH AND NORTH-WEST INDIA						
8 Jammu Kashmir						
Ladakh	-	SCD	Passage	-	Naoroji, 2006	
9 Himachal Pradesh						
Dharmasala, Kangra. (32°22'N 76°32'E)	October 2001– March 2002	1500–2400 m, V	8194	33 Sp.	Besten, 2004	
Chamba (32°57'N 76°13'E), Lahul Spiti (32°50'N 77°83'E) and Shimla (31°10'N 77°17'E)	2000–2004	1550–4500 m	6	22 Sp.	Mahabal, 2005	
Dharmasala	1969	2168 m, V, AF	1	-	Abdulali, 1969	
Pong Dam, Kangra 32°01'N 76°98'E	2005–2008	436 m	2	15 Sp.	Paliwal and Mehta, 2009	
Simbalbara WLS, Sirmour 30°26'N 77°30'E	2006–2008	932 m	1	10 Sp.	Sharma et al., 2009	
Simla	Undated	2213 m, AF	Common	-	Jones undated	
10 Uttarakhand						
Uttarkashi	March 1987	3000 m, AF, M	2	1 Sp.	Naithani & Bhatt, 2010	
Pauri	Jan–Dec 2005–2008	540–2180 m, M, F	30	9 Sp.	Nayar, 1987	
Dehra Dun Valley (30°04'–30°45'N 77°35'–78°15'E)	1982–2000	2000 m, V, F	Common	-	Singh, 2000	
Chenab Valley, Chamoli district	March–April 2005	2800–3200 m, V, F	Common	11 Sp.	Bhattacharya and Satyakumar, 2007	
Kedarnath Musk Deer Reserve, Uttaranchal (30°45'N 79°36'E)	2006	1160 m, M, F	Rare		Myers and Singh, 2006	

1	2	3	4	5	6	7
	Kumaon (28°43'55"–30°30'12"N, 78°44'30"–80°45'E)	Apr 1995– July 1997	1200–3500 m, M, F	Rare	36 Sp.	Sultana & Khan, 2000
	Kumaon Himalayas Chamoli district (30°40'N 79°35'E)	2004–2005 2006–2007	1200–3500 m, M, F 1293 m, F	1 1	20 Sp. 23 Sp.	Ilyas, 2005 Tak & Sati, 2008
	Nandadevi NP, Joshimath Corbett NP, Ranikhet & Nainital 29°13'–29°35'N 78°33'–78°46'E	1994–1996 1982–1985	2500 m, M, AF 1869 m	1 Common	- 15 Sp.	Tak, 1997 Lamba, 1987
	Corbett NP, Ranikhet & Nainital Corbett NP Ranikhet Dudhwa NP (28°30.5N 80°40.8E)	April–June 1993–1996 Jan 2009 Feb 2011; 2012 1998	1869 m, F, R 1869 m, F, R 1869 m, F, M 150 m, F	>100 1 1 -	50 Sp. - - -	Naoroji, 1999 Joshi, 2009 Jingar 2011, 2012 Javed & Rahmani, 1998
11	Uttar Pradesh					
	Dehra Dun, Pauri, Tehri, Chamoli and Nainital 29°53'N 78°93'E	1990–1994	2084–2500 m	10	22 Sp.	Tak, 1995
	Katerniaghat WLS (28°15'N 81°61'E)	2005	1056 m, F	Rare	10 Sp.	Kalam, 2005
12	Delhi					
	Delhi Okhla Barrage Delhi city	1995–1996 2003; 1993 1991	705 m 705 m, W 705 m, U	Rare Rare Common	16 Sp. 26 Sp. 44 Sp.	Tak and Sati, 1997 Urfi, 2003; Alstrom, 1993 Anonymous, 1991
13	Haryana					
	Kalesar WLS (30°24'N 77°32'E) Hissar Hisar	1993–1995 1969 1952	700 m, F 210 m, U 210 m, U	Rare 1 -	19 Sp. - -	Kalsi, 1998 Abdulali, 1969 Donald, 1952
14	Punjab					
	Punjab Lyallpur	1993 Jan 1929	180 m, C 184 m, C	- 1	- -	Singh et al., 1993 Husain and Bhalla, 1937
CENTRAL INDIA						
15	Madhya Pradesh & Chhattisgarh					
	Madhya Pradesh & Chhattisgarh Madhya Pradesh & Chhattisgarh Kuno WLS, (25°30'N 77°07'E) Gwalior Gond Raipur	Before 2004 2005–2007 Dec 2006– Apr 2007 1969 1969 1935	250 m 250 m 229 m, F 197 m, D 200 m, D 295 m, D	Common Common Rare 1 1 1	58 Sp. 30 Sp. 16 Sp. - - -	Chandra & Singh, 2004 Ghosh et al., 2008 Ramesh et al., 2011 Abdulali, 1969 Abdulali, 1969 D'Abreu, 1935
WESTERN INDIA						
16	Rajasthan					
	Desert NP, Jaisalmer 25°47'–26°46'N 70°15'–70°45'E Jorbeer, Bikaner National Chambal Sanctuary: Rajasthan, UP, MP (24°55'–26°50'N 75°34'–79°18'E) Tal Chhappar WLS (27°47'N 74°26'E) Tal Chhappar Tal Chhappar, Chiru district Tal Chhappar Sambhar Lake (26°52'–27°02'N 74°54'–75°14'E) Mount Abu WLS (24°33'–24°43'N 72°38'–72°53'E) Keoladev NP, Bharatpur (27°07'N 77°29'E)	March 1995 Sep–May 2003–2006 2006–2010 Sept 2007 Dec 2008 2006–2008 Nov 2012 1990–2009 March 2001– May 2005 2003–2006	229 m 235 m, SA 200–500 m, R 302 m, SA 302 m, SA 302 m 302 m, SA 360 m, L, W 1158 m, M, F 100 m, W	1 1100 Rare Rare 1 Rare 1,1 Common 6 1	15 Sp. - - 7 Sp. - 4 Sp. - 26 Sp. 17 Sp. 32 Sp.	Kankane, 2004 Sharma & Sundar, 2009 Nair & Krishna, 2013 Praveen, 2007 Rao, 2008* Sanjeev Kumar, 2009 Shukla, 2012*; Krishnamoorti, 2012* Sangha, 2009 Sangha & Devarshi, 2006 Venkitachalam et al., 2008

1	2	3	4	5	6	7
	Keoladev NP, Bharatpur (27°07'N 77°29'E)	1985–1989	100 m, W	8	10 Sp.	Naoroji, 1990
	Churu district, Thar desert (27°05'N 73°05'E)	2008–2009	292 m, Ds	1	21 Sp.	Singh et al., 2009
	Bikaner	Jan 2013	242 m, SA	1, 1	-	Krishnan A., 2013*; Ravi, 2013*
	Bikaner	March 2013	242 m, SA	1	-	Krishnan K. P., 2013*
	Udaipur	Nov 2011; Dec 2011	500–1300 m, SA, L	1, 1	-	Joshi, 2011*; Parashar, 2011*
	Jaisalmer	Jan 2013	231 m, SA	1	-	Deomurari, 2011*
17	Gujarat					
	Dhabla Pound & Thol Bird Sanctuary	2000–2003	53 m, F		8 Sp.	Iyer, 2005a
	Thol Bird Sanctuary	2005	53 m, F	-	-	Iyer, 2005b
	Thol	Feb 2009	F		1 Sp.	Hathi, 2009*
	Nal Sarovar (22°58'44"N 72°21'15"E)	2004	53 m, L, W	Rare	-	Parasharya, 2004
	Chari Dhand, Banni WLS	1990; Jan 2005	3 m, Gr	250	32 Sp.	Tiwari & Varu, 2005
	Banni WLS	Nov 2007	3 m, Gr	1	-	Bharadwaj, 2007*
	Chari Dhand	Jan 2008	<10 m, Gr	1	-	Deomurari, 2008*
	Pung Bet, Little Rann of Kutch	1998–1999	2–3 m	1	15 Sp.	Dutta, 2000
	Little Rann of Kutch WLS	2007; 2008	2–3 m, Ds	Rare	-	Varu, 2007; Vora et al., 2009
	Little Rann of Kutch WLS	1969	2–3 m, Ds	1	-	Abdulali, 1969
	Little Rann	Jan 2009	2–3 m, Ds	1	-	Bhatt, 2009*
	Kutch	Dec 2011; 2012; Nov 2012	2–3 m, Ds	1,1,1	-	Brid, 2011*; Dani, 2012*; Subramaniyan, 2012*
	Little Rann	Jan 2013, Feb 2013, Feb 2013	2–3 m, Ds	1,1,1	-	Sheth, 2013*; Belur, 2013*; Mehta, 2013*
	Great Rann of Kutch	Feb 2008, Dec 2008	2–3 m, Ds	1	-	Reddy, 2008* Sachdev, 2008*
	Kalavad Road, Rajkot	Nov 2004	142 m, SA, C	29	-	Mashru, 2005
	Ahmadabad	Jan 2013	53 m, G	1	-	Jingar, 2013*
18	Maharashtra					
	Bapdeo Ghat, Pune	1970–1978	630 m	1	-	Mahabal & Lamba, 1987
	Garbage dump, Devachi Uruli, Pune (18°52'N 73°84'E)	Dec 2005– Jan 2006	611 m, G, U	134 (93 A; 41 Juv)	-	Pande et al., 2010
	Pune	Dec 2011	611 m, G	1	-	Kurhade, 2011*
	Pune	May 2009	611 m, G	1	-	Pishsey, 2009*
	Pune	Dec 2012	611 m, G	1,1	-	Pawar, 2012*; Avate, 2012*
	Nashik (20°14'N 73°78'E)	2004	565 m, C	Rare	30 Sp.	Raha et al., 2004
	Aurangabad (19°87'N 75°33'E)	1985–2000	582 m, SA	Occasional	-	Yardi, 2000
	Pachgani	Nov 2003; Jan 2013	1293 m, G	200, 1	-	Prasad, 2003; Rao, 2013*
	Hadapsar, Pune	Jan–March 2003	611 m, G	200	-	Prasad, 2003
	Mumbai	2000–2002	0–10 m, U	11	-	Monga, 2001
	Mumbai	1938	0–10 m, U	Straggler	-	Ali & Abdulali, 1938
	Elephanta Island, Mumbai	1994	0–625 m, Is	Few	-	Clark, 1994
	Dhule district	1882	250 m, SA	Abundant	-	Davidson, 1882
	Nagpur	1935	SA	1	-	D'Abreu, 1935
	Gautala Autramghat Sanctuary, Jalgaon district. (20°10'N 74°54'E)	2005	200 m, F, M	1	12 Sp.	Pande & Pathak, 2005
	Tansa WLS, Thane district (19°24'N 73°07'E)	2005	11 m, L, F	1	15 Sp.	Pande & Pathak, 2005
19	Goa					
	Carambolim	Dec 1996	59 m, L	1	-	Lainer (Holt), 2004
	Bondla WLS	Nov 1997	915 m, F	1 Juv	-	Lainer (Holt), 2004
	Chorao-Tikanem	Dec 1997	15 m, F	1 A	-	Lainer, 2004
	Curtorium Tank	Feb 2002	38 m, L	2 A	-	Lainer, 2004
	SOUTH INDIA					
20	Karnataka					
	Belgaum (15°87'N 74°50'E)	Dec 2004– Jan 2005	779 m, G	7	2 Sp.	Sant, 2005
21	Tamil Nadu					
	Tamil Nadu	2006–2008	-	Rare	16 Sp.	Thirumalai, 2009
	Madumali NP	-	960 m, F	Straggler	-	Naoroji, 2006
	Pt. Calimere WLS	Dec 1988	0 m, SC	1	1 Sp.	Rajan et al., 1994
	Pt. Calimere WLS	1990	0 m, SC	1	-	Natrajan et al., 1990

1	2	3	4	5	6	7
	Madras (Chennai)	1844	5 m, SC, U	-	-	Jerdon, 1844
22	Kerala					
	Periyar Tiger Reserve & Mahendragiri RF, Kanyakumari Forest Division 80°20'N 77°33'E	2004	1337 m, F, L	Straggler	-	Sashi Kumar, 2004
	Kuttanad (9°17'–9°40'N 76°19'–76°33'E)	1995–2007	0.6–2.2 m, F	Rare	14 Sp.	Narayanan et al., 2011
	Kumarkom, Kottayam Kattampally wetland, Kannur	2008 -	1600 m, W 200 – 3200 m, W	Rare 1 Imm	- -	Narayanan et al., 2008 Sashi Kumar in Naoroji, 2006
OTHER COUNTRIES						
23	AFGHANISTAN					
	Afghanistan	1959	1250 m, M	-	-	Paludan, 1959
	Dare-Adzhar, Nuristan	-	1230 m, M	Rare	-	Argandeval, 1983 in Naoroji, 2006
24	PAKISTAN					
	Karachi city	Nov 1979	10 m, U	1	22 Sp.	Roberts, 2003
	Pakistan	1996	25 m	-	-	Khan et al., 1996
	Esar, Karachi	Nov 2004	10 m, U	1	1 Sp.	Naoroji, 2005
	Taunsa Barrage WLS (30°30'N 70°50'E)	2009–2011	137 m, W	Rare	10 Sp.	Bibi & Ali, 2013
	Dera Ismail Khan (31°49'N 70°57'E)	Sept–May 1998	157 m, SA	Rare	41 Sp.	Kylänpää, 2000
	Wazirabad	1969	22 m, SA	1	-	Abdulali, 1969
25	BHUTAN					
	Tongsa	March 1994	2200 m, M	2	2 Sp.	Bishop, 1999
26	NEPAL					
	Kathmandu Valley	1983	2000 m, M, V	45,000	-	Fleming, 1983
	Khare, Annapurna Valley	October 1985	1646 m, M, V	10,000–20,000 (28% Juv; 28% Imm; 44% A)	30 Sp.	De Roder, 1989
	South Col, Mt. Everest	Autumn 1952; May 1960	7925 m, M	1 1	-	Ali & Ripley, 2001; Singh, 1961
	Nepal provinces	1985	1800 m, M, V, F	100/hr (about 1000)	-	Inskipp & Inskipp 1993, 1994
	Saibu, Bagmati–Kathmandu	Nov–April 2003; 2006	1300 m, M, V	24/day	-	Riessen, 2007
	Dhading, Kathmandu	Sept 2006	1250–1540 m, M	Common	7 Sp.	Choudhary, 2007
	Dhampus, Hanja, Kali Gandgki, Arun, Dudhkosi Valleys	Nov 1976–1980	1750 m, M, V	566	-	Fleming, 1983
27	SIKKIM					
	Dzongri Ridge, western Sikkim	Nov 1980	1800 m, M	5	-	Fleming, 1983
28	TIBET					
	Eastern Tibet	Nov–March 1995	1350 m, AF, SCD	1	-	Ellis et al., 2001; 2002
29	MYANMAR					
	Puttao	Jan–Nov 1999	2100 m, C	8	3 Sp.	King, 2011
30	BANGLADESH					
	Bangladesh	1996	0–1000 m	Rare	-	Thompson & Johnson, 1996

Abbreviations: A – adult; AF – alpine forest; C – cropland; D – Deccan plateau; Ds – desert; F – forest; G – garbage / carcass dump; Gr – grassland; Imm – Immature; Is – island; Juv – juvenile; L – lake; m – meters above mean sea level; M – mountain; MP – Madhya Pradesh; NP – national park; R – river; RF – reserved forest; SA – semi-arid; SC – sea coast; SCD – subarctic cold desert; Sp. – species; U – urban fringes; UP – Uttar Pradesh; V – valley; W – wetland; WLS – Wild Life sanctuary.

Сокращения: А – взрослые; АF – альпийский лес; С – пахотные земли; D – плато Декан; Ds – пустыня; F – лес; G – свалка мусора / туши; Gr – пастбища; Imm – неполовозрелые, молодые; Isc – остров; Juv – особи первого года жизни; L – озеро; m – м над уровнем моря; M – гора; MP – Мадхья Прадеш; NP – национальный парк; R – река; RF – охраняемый лес; SA – полузасушливые; SC – морское побережье; SCD – субарктическая холодная пустыня; Sp. – виды; U – городские окраины; UP – Уттар Прадеш; V – долина; W – водно-болотные угодья; WLS – заповедники дикой природы.

* – Source is from photographic records. / Данные взяты из фото-записей.

* – The confirmed photographic records of Steppe Eagle are gleaned from the website / Подтверждённые фото-записи о степном орле были взяты с сайта: <http://www.indianaturewatch.net/>.

The names of the photographers and the year the photograph was taken are as follows / Имена фотографов и годы фотографий следующие: Avate, Abhijeet, 2012; Belur, Sugandhi Rana, 2013; Bharadwaj, Gobindsagar, 2007; Bhatt, Nirav, 2009; Brid, Deepak, 2011; Dani, Indraneel, 2012; Deomurari, Arpit, 2008; 2013; Dutt, Nirupam, 2013; Hathi, Dhavit, 2009; Jingar, Malhar Raj, 2011, 2012, 2013; Joshi, Pradeep, 2011; Joshi, Sagar, 2009; Krishnamoorthi, Santosh, 2012; Krishnan, Anuroop, 2013; Krishnan K.P. 2013; Kurhade, Vijay, 2011; Mehta, Nihar, 2013; Parashar, Sanjay, 2011; Pawar, Vishwatej 2012; Pishsey, Santosh, 2009; Rao, Madhukar, 2007, 2008; Rao, Rahul, 2013; Ravi, Savitha, 2013; Reddy, Sridhar, 2008; Sachdev, Rahul, 2008; Sheth, Tapan, 2013; Shukla, Sudhir, 2012; Subramanian, Sunder, 2012.

хищниками. В тех же регионах, где встречались степные орлы, до 59 видов хищных птиц также были отмечены, что показывает, что такие регионы являются подходящими для обитания пернатых хищников. Распределение по высоте встреч на Индийском субконтиненте варьировало от 0 м над уровнем моря в Гуджарате и Керала до 4500 м в Аруначал-Прадеш. В Индии степной орёл встречается в 27 особо охраняемых природных территориях (заповедниках, национальных парках и заповедниках живой природы).

Анализ распределения записей, указанных в таблице 1, показывает, что орлы встречаются в различных местообитаниях, таких, как альпийские луга, горные леса, скалы в Гималаях, на склонах с редкой растительностью, на Гангской равнине, по берегам рек, в пустынях и в полупустынных регионах, на пастбищах, в тропическом лесу, в сухом лиственном лесу, по опушкам лесов, на болотах, орошаемых полях и на городских окраинах. Интересно отметить, что орлы собирались вокруг мусора и падали на свалках Раджастан (Tiwari, Varu, 2005; Sharma, Sunder, 2009), Гуджарата (Mashru, 2005), Махараштры (Pande et al., 2010; Rao, 2013) и Карнатака (Sant, 2005), что указывает на их привычку подбирать отходы. Кроме того, было замечено, что степные орлы также использовали ранние утренние термики на мусорных свалках для дальнейшей миграции (Pande et al., 2010). Мы отмечали случаи, когда степные орлы преследовали лугового луня (*Circus pygargus*) и чёрного коршуна (*Milvus migrans*) для кражи добычи у них, а также случаи клептопаразитизма. Степных орлов регулярно встречали в группах с большеклювой вороной (*Corvus macrorhynchos*).

Как видно из записей, степные орлы в ходе миграций с мест гнездования в регионах с умеренным климатом на Индийский субконтинент проходят через «буты-



ows, alpine forest, cliffs in Himalayan zone, slopes with sparse vegetation, Gangetic plains, riverside habitat, desert, semiarid regions, grassland, tropical thorn forest, dry deciduous forest, edge forest, wetland, irrigated cultivation and urban fringes. It is interesting to note that the eagles congregated around garbage and carrion dumps at Rajasthan (Tiwari & Varu, 2005; Sharma & Sunder, 2009), Gujarat (Mashru, 2005), Maharashtra (Pande et al., 2010; Rao, 2013) and Karnataka (Sant, 2005), indicating its habit as a scavenging raptor. Further, it was noticed that the Steppe Eagles also use the early morning thermals on garbage dumps for onward migration (Pande et al., 2010). We recorded instances when the Steppe Eagles chased Montagu's Harrier (*Circus pygargus*) and Black Kite (*Milvus migrans*) for stealing prey from them, cases of kleptoparasitism. So also, we commonly noticed that the Steppe Eagles were mobbed by Jungle Crows (*Corvus macrorhynchos*).

It is evident from the records that the Steppe Eagles while migrating from their breeding grounds in the temperate regions to Indian subcontinent, the eagles bottlenecked at various Himalayan valleys in Nepal (Annapurna, Kali Gandgki, Arun, Dudhkosi) and in India (Kangra and Dharamsala in Himachal Pradesh), where they were reported in large numbers in passage.

Ali and Ripley (2001) have reported the southern extent of the Steppe Eagle in India up to Mumbai, however, our records show that the species is occurring further south of Mumbai, Maharashtra, in the states of Goa, Karnataka, Tamil Nadu and Kerala. Further, Ali and Ripley (2001) have also stated that this species was a straggler in South Orissa, Assam and East Pakistan, but we find its distribution further east in Arunachal Pradesh, Manipur, Mizoram and Bangla Desh.

Within India we have classified the records of the Steppe Eagle according to the following divisions and states (fig. 1):

- a) North-East India;** $n=7$ (Arunachal Pradesh, Manipur, Meghalaya, Mizoram and Assam);
- b) Eastern India;** n =not available (Orissa and West Bengal);
- c) North and North-West India;** $n=8380$ (Jammu Kashmir, Himachal Pradesh, Uttara-

Степной орёл (*Aquila nipalensis*).
Фото К. Гадже, Фонда Эла.

Steppe eagle (*Aquila nipalensis*).
Photo by K. Ghadge, Ela Foundation.

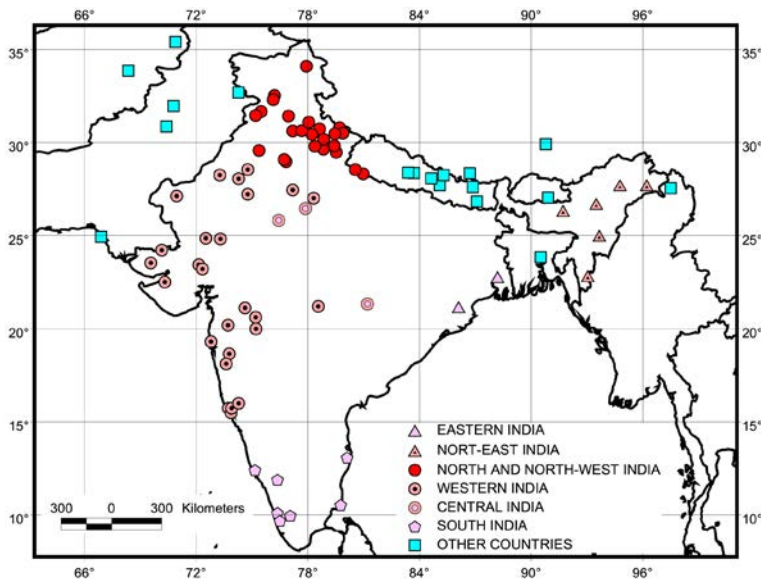


Рис. 1. Карта распределения встреч степного орла (*Aquila nipalensis*) на Индийском субконтиненте.

Fig. 1. Map of distribution of meetings the Steppe Eagle (*Aquila nipalensis*) in the Indian subcontinent.

лочные горлышки» в нескольких долинах в Гималаях в Непале (Аннапурна, Кали Гандки, Арун, Духкоси) и в Индии (Кангра и Дхарамсала в штате Химачал-Прадеш), где они были зарегистрированы в больших количествах.

Ранее считалось, что южная граница распространения степного орла в Индии – до Мумбаи (Ali, Ripley, 2001), однако, наши данные показывают, что вид пролетает и южнее Мумбаи (штат Махараштра), в штаты Гоа, Карнатака, Тамил-Наду и Керала. Кроме того, С. Али и С. Рипли (Ali, Ripley, 2001) также утверждают, что этот вид был редок в Южной Ориссе, Ассаме и в Восточном Пакистане, но мы находим его распространение далее на восток в Аруначал-Прадеш, Манипур, Мизорам и Бангладеш.

Внутри Индии мы классифицировали учёты степных орлов в соответствии со следующими районами и штатами (рис. 1):

а) Северо-Восточная Индия; $n=7$ (Аруначал-Прадеш, Манипур, Мегхалая, Мизорам и Ассам);

б) Восточная Индия; $n=нет$ данных (Орисса и Западная Бенгалия);

в) Северная и Северо-Западная Индия; $n=8380$ (Джамму Кашмир, Химачал-Прадеш, Уттаракханд, Уттар-Прадеш, Дели, Харьяна, Пенджаб и Чандигарх); появление орлов в Химачал-Прадеш от Дхарамсала, Кангра и Симле; в Уттаракханде от района Хамоли; в Дели, было сообщено, как обычное.

г) Центральная Индия; $n=5$ (Махья-Прадеш и Чхаттисгарх);

д) Западная Индия; $n=1939$ (Раджастхан, Гуджарат, Махараштра и Гоа); в Раджастхане орлы распространены в Бика-

кханд, Уттар Прадеш, Дели, Харьяна, Пенджаб и Чандигарх); Occurrence in Himachal Pradesh from Dharamsala, Kangra and Simla; in Uttarakhand from Chamoli district; and in Delhi, was reported as common.

д) Central India; $n=5$ (Madhya Pradesh and Chhattisgarh);

е) Western India; $n=1939$ (Rajasthan, Gujarat, Maharashtra and Goa); In Rajasthan it was common in Bikaner and around Sambhar lake. In Gujarat it was common in Banni. In Maharashtra it was common in Pune and Pachgani.

ф) South India; $n=15$ (Karnataka, Tamil Nadu and Kerala).

We found no records from two states of Eastern India (Bihar and Jharkhand) and Oceanic Islands (Lakshadweep Islands in the Arabian Sea and Andaman & Nicobar Islands in the Bay of Bengal) (fig. 1).

г) In the other countries within the Indian subcontinent the Steppe Eagle was common in Nepal ($n=66,567$ approx.), while it was poorly reported from Afghanistan, Pakistan, Bhutan, Sikkim, Myanmar and Bangladesh.

Conclusions

The Steppe Eagle is a common winter visitor to India and we found records of its occurrence from 9 countries in the Indian subcontinent. From 2004 onwards, it was noticed that the Steppe Eagles were recorded across entire India. Higher populations were recorded in northern states of India and Nepal, where the concentration of populations was along the Himalayan foothills in the east-west direction. They were scarcely reported from elsewhere except India and Nepal. There were no reports from Andaman and Nicobar Islands, Lakshadweep Islands and from Sri Lanka. They associated with various raptor species throughout India. Though the Steppe Eagles occupied wide range of habitats, they were seen to congregate on garbage dumps. Theoretically, they are at a risk of poisoning by ingesting pesticides and rodenticides, because of their scavenging habit.

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нер и вокруг оз. Самбхар; в Гуджарате – в Бани; в Махараштре – в Пуне и Пачгани.

е) Южная Индия; $n=15$ (Карнатака, Тамил Наду и Керала).

Мы не нашли никаких записей из двух штатов Восточной Индии (Бихар и Джаркханд) и океанических островов (Лакшадвип о-вов в Аравийском море и Андаманских и Никобарских о-вов в Бенгальском заливе) (рис. 1).

ж) Из других стран Индийского субконтинента степной орёл обычен в Непале ($n=66567$ – оценочно), в то время как очень мало сообщений из Афганистана, Пакистана, Бутана, Сиккима, Мьянме и Бангладеш.

Закключение

Степной орёл является обычным зимним посетителем Индии, и мы нашли записи о его появлении в 9 странах на Индийском субконтиненте. Начиная с 2004 г., было отмечено, что степные орлы были встречены во всей Индии. Более высокая численность была зарегистрирована в северных штатах Индии и Непале, где концентрация орлов приходится на предгорья Гималаев в направлении с востока на запад. Очень мало сообщений о встречах степного орла из других стран, за исключением Индии и Непала. Также не было никаких сообщений с Андаманских и Никобарских островов, с о. Лакшадвип и из Шри-Ланки.

Степные орлы связаны с различными видами хищников по всей Индии. Хотя степные орлы заняли широкий спектр местобитаний, они регулярно собираются на мусорных свалках. Теоретически, там они могут отравиться, проглотив пестициды и родентициды, из-за привычки подбирать мусор.

Степной орёл (*Aquila nipalensis*).

Фото К. Гадже, Фонд Эла.

Steppe Eagle (*Aquila nipalensis*).

Photo by K. Ghadge, Ela Foundation.

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