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WAGTAILS IN SALKHALA GAME RESERVE, AZAD KASHMIR, PAKISTAN

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Abstract. Salkhala Game Reserve falls under Important Bird Area category, an Endemic Bird Area (128) of Western Himalayas. During the survey in 2008 six species of Wagtails (White Wagtail, Grey Wagtail, Yellow-headed Wagtail, Yellow Wagtail, Large Pied Wagtail and Forest Wagtail) were recorded. White Wagtail was found to be the most abundant species from them, Yellow-headed Wagtail had the most broad altitudinal range in the reserve. Collection of timber and firewood, grazing, collection of grasses, vegetables, mushrooms and careless use of pastures as summer residence by the community living around the Salkhala Game Reserve are the major threats to the wildlife.

Key words: wagtail, distribution, abundance, altitudinal range, Important Bird Area.

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Трясогузки в охотничьем резервате Салхала, Азад Кашмир, Пакистан. - М.Н. Аван, А.А. Аван. - Беркут. 18 (1-2). 2009. - Резерват Салхала относится к IBA и EBA Западных Гималаев. Исследования проводились с января по декабрь 2008 г., резерват посещался с интервалом в два месяца. Всего обнаружено 6 видов трясогузок – белая, горная, желтоголовая, желтая, белобровая, древесная. Из них наиболее обычной была белая, желтоголовая имела самый широкий высотный диапазон распространения. Основными угрозами для диких животных в резервате являются лесозаготовки, выпас скота, сбор растений и грибов местным населеним.

INTRODUCTION

Azad Kashmir is situated at the foothills of the Himalayas, approximately between 32–36° N and 73–75° E. The climate is subtropical and the average rainfall is 150 mm (Awan, Mir, 2007). Salkhala Game Reserve, Study area, lies between the geographical coordinated of 34° 33´ N and 73° 50´ E , having an area of 2,000 acre and is 80 km in North-West of Muzaffarabad city, in Bandi Range of Keran forest division in Neelum Valley, Azad Kashmir. Salkhala was notified as Game Reserve in 1982, with an elevation ranges from 4,500 feet to 10,332 feet a.s.l. The prevailing plant species of the Game Reserve include *Cedrus deodara, Pinus wallichiana, Abies pindrow, picea smithiana, Taxus wallichiana, Acer caecium, Butula utilis, Berberis* spp.*, Quercus* spp., *Juniperus communis, Vibernum* spp.*, Indegofera gerardiana, Juglans regis, Aesculus indica*, etc. Heavy rains and snowfalls are characteristic for the area.

Salkhala Game Reserve fell under the category of Important Bird Areas of BirdLife International and an Endemic Bird Area (128) of Western Himalayas. It has many important bird species like *Tragopan melanocephalus*, *Catreus wallichi*, *Ficedula subrubra* (Important Bird Areas, 2004).

MATERIAL AND METHODS

Survey was carried out in Salkhala Game Reserve (Fig. 1) from January 2008 to December 2008.The area was visited in alternate months i.e. February, April, June, August, October and December to gather information on the wagtails. During the study, birds were recorded by direct sightings and by interviewing local wildlife staff. Transects were hiked along existing and newly cut paths. Observations were made with binoculars (10 x 50) and for identification Kazmierczak (2000) and Mirza (2007) were used. Data collected was analyzed using standard statistical methods to calculate the percentage frequency of the species.

RESULTS AND DISCUSSION

During the survey six species of Wagtails were recorded (Table 1).

White Wagtail (*Motacilla alba*) is recorded as winter visitor to the Salkhala. Awan et al. (2004) reported the White Wagtail as a winter visitor in Muzaffrabad city. The bird was mostly recorded in grassy and marshy places, winter visitor over most of the India becoming uncommon towards extreme south (Grewal, 1993) and is a bird of damp grassy places and ponds (Wood Cock, 1980).This bird is the most abundant species of wagtails from the reserve. Its relative abundance is calculated 0.26 with a density of 5.47 ind./km^2 (Table 2). Awan and Mir (2007) recorded this Wagtail with a percentage frequency of 1.01 from Recreational Park Pattika, Azad Kashmir.

According to Ali and Ripley (1973) this species of wagtails is a widespread and common visitor to Pakistan in the plans and foothills (in Punjab up to 1000 m, in Baluchistan 1800 m). The White Wagtail is recorded with lower altitudinal limit at 1340 m migrating as high as 2110 m in Salkhala Game Reserve (Table 2). Anil (2000) recorded its altitudinal movement between 2500–2800 m in Talra Wildlife Sanctuary in lower Western Himalaya, Himachal Pradesh.

Grey Wagtail (*M. cinerea*) is widely distributed, chiefly about mountain streams in Europe and northern Asia, migrating southward to Africa and southern Asia in winter (Whistler, 1949). During the present survey it is recorded as a summer visitor in Salkhala Game Reserve.

Grey Wagtail is a common summer (breeding) visitor to the ranges of Pakistan from Northern Baluchistan to Chitral, thence east to Gilgit, Baltistan, Ladakh and Kashmir to Central Nepal (Ali, Ripley, 1973). In Salkhala Game Reserve its density is calculated 5.0 ind./km^2 with a relative abundance of 0.24 (Table 2). Hassan (2004) reported this wagtail as a frequent summer breeding bird in Machiara National Park.

Anil (2000) recorded its altitudinal movement between 1800–3900 m in Talra Wildlife Sanctuary in lower Western Himalaya, Himachal Pradesh. In Salkhala its lower altitudinal limit is 1420 m and upper limit recorded is 2650 m (Table 3). It breeds between 2100 and 2900 m (Quetta), 1800–2400 m (Safed Koh) and between 2100 and 4300 m (Nepal) (Ali, Ripley, 1973). It is quite plentiful breeding up to 3960 m elevation alongside mountain streams in Chitral, Gilgit and Baltistan (Roberts, 1992).

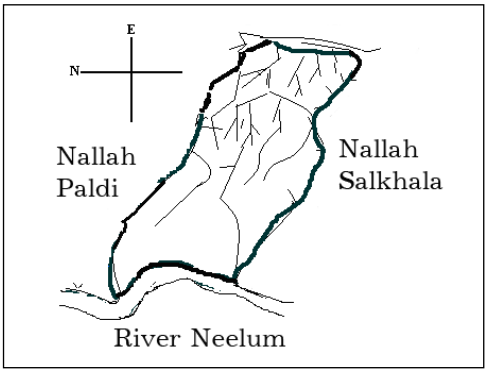

Fig. 1. Study area.
Рис. 1. Район исследований.

Yellow-headed Wagtail (*M. citreola*) is recorded as a summer visitor to Salkhala Game Reserve. According to Mirza (2007) it is a summer breeding bird in Northern areas, Hazara, Swat, Chitral, Safed Koh, marshy

Table 1

Local names and status of wagtails in Salkhala Game Reserve
Местные названия и статус трясогузок в охотничьем резервате Салхала

Scientific name	Local name	Status
Motacilla alba	Safaid Chidi mabola	W
M. cinerea	Kala Chidi mabola	S
M. citreola	Pikhaya Chidi	S
M. flava	Pikhaya Chidi	W
M. maderaspatensis	Chidi	R
Dendronanthus indicus	Jungli Chidi	P

Status: W – winter visitor, S – summer visitor, R – resident species, P – migratory species.

Table 2

Relative abundance and population density of wagtails in Salkhala Game Reserve
Относительное обилие и плотность населения трясогузок в охотничьем резервате Салхала

Species	Relative abundance, %	Population density, ind./km^2
Motacilla alba	0.26	5.47
M. cinerea	0.24	5.00
M. citreola	0.17	3.60
M. flava	0.16	3.38
M. maderaspatensis	0.11	2.21
Dendronanthus indicus	0.07	1.40

areas of Baluchistan including Kalat. Yellow-headed Wagtail is a summer breeding visitor but it is rare in Machiara National Park (Hassan, 2004).

This bird had the most broad altitudinal range among wagtails in the reserve (Fig. 2). The species was recorded between 1530 m to 2830 m in Salkhala Game Reserve during the present survey (Table 3). Awan and Mir (2007) recorded this wagtail from Recreational Park Pattika with a percentage frequency of 0.28 and its density is calculated 3.6 ind./km^2 with a relative abundance of 0.17 from the Salkhala during the present survey. It breeds mostly between 3000 m and 4600 m in Kagan valley down to 2600 m in Chitral to 1800 m and in Kashmir 1500 m (Ali, Ripley, 1973).

Table 3

Altitudinal range of distribution of wagtails in Salkhala Game Reserve (m)
Высотный диапазон распространения трясогузок в охотничьем резервате Салхала (м)

Species	Lower limit	Upper limit
Motacilla alba	1340	2110
M. cinerea	1420	2650
M. citreola	1530	2830
M. flava	1470	2240
M. maderaspatensis	1320	2280
Dendronanthus indicus	1760	2310

Yellow Wagtail (*M. flava*) is an abundant and widespread winter visitor in Pakistan. It breeds in Ladakh and possibly in Northern Kashmir between 3600 m and 4500 m (Ali, Ripley, 1973). Four subspecies of the Yellow Wagtail visit Pakistan in winter (Mirza, 1998). It was recorded as a winter visitor in Salkhala Game Reserve with a relative abundance of 0.16 (Table 2). Yellow Wagtail is a winter visitor to Northern areas of Pakistan (Mirza, 2007).

In Salkhala Game Reserve its altitudinal range is recorded between 1470 to 2240 m (Table 3). Its upper altitudinal range is 2030 m in Machiara National Park (Hassan, 2004). Yellow Wagtail is also reported from Recreational Park Pattika with a percentage frequency of 1.28 (Awan, Mir, 2007). During our survey its density is calculated 3.38 ind./km^2 in Salkhala (Table 2).

Large Pied Wagtail (*M. maderaspatensis*) is the only resident species of wagtails found in Salkhala Game Reserve. Its abundance is calculated 0.11 (Table 2). This bird is distributed in India, south of Himalayan foothills to about 1200 m, this is the only resident wagtail in the Indian plain. It inhabits rocky streams, rivers, ponds and sometimes may enter wet cultivations (Grewal, 1993). Its density is calculated as 2.21 birds/km^2 in Salkhala (Table 2). Large Pied Wagtail occurs through out India from the North-West Frontier Province and Sind to Western Bengal and from the outer Himalayas which it ascends to 5000 ft (Whistler, 1949).

According to Kazmierczak (2000) it is mostly found in pairs near water below 2200 m and is a resident species of the India.

Mirza (2007) describe this species as resident in Punjab, common in districts Pothahar and Salt Ranges. During the present survey it is observed

that the Large Pied Wagtail migrate altitudinally between 1320 to 2280 m in Salkhala Game Reserve (Table 3). According to Awan et al. (2004) it is a common resident species of Muzaffrabad city where it is also recorded in Recreational Park Pattika.

Forest Wagtail (*Dendronanthus indicus*) is the least abundant species of wagtails found in Salkhala. Its relative abundance is 0.07 and the population density 1.40 ind./km^2 (Table 2). This wagtail breeds extra-limitally mainly in extreme Southeastern Siberia, Korea and Northeastern China (Roberts, 1992). Mirza (2007) recorded this species in the riverain patches of *Acacia arabica* forest in Thatta District. According to Kazmierczak (2000), it was found above 1525 m in summer and in winter from foothills to 2200 m. During the our survey Forest Wagtail was recorded with an altitudinal range 1760–2310 m (Table 3).

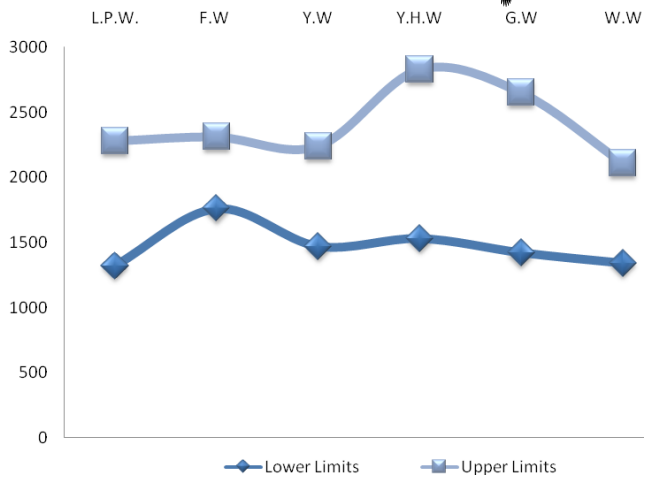

Fig. 2. Dynamics of altitudinal range of wagtails.
Рис. 2. Динамика высотного распространения трясогузок.

Collection of timber and firewood, grazing, collection of grasses, vegetables, mushrooms and careless use of pastures as the summer residence by the community living around the Salkhala Game Reserve are the major threats to the wildlife of the area. All these activities severely damage the habitats of wildlife especially the birds. Mostly children and women were involved in such activities. They need to be educated to mould their mind towards the conservation of birds of the area.

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