

Short Communications

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NON-SONG BIRDS OF VALLEY SWAT: PAKISTAN

Abstract.- The checklist includes 38 non-song birds (Non-passeriformes) of the valley Swat along with their key characters, status, specific locality, English and vernacular names. Foraging, roosting, breeding, plumage and migratory characters are also being considered.

Key words: Non-song birds, checklist, Swat.

Valley Swat is situated in the North of Pakistan, 150 km away from Peshawar. It is bounded on the west by the Malakand Agency and District Dir, on the north by the District Chitral and Gilgit, on the east by Kohistan of the Northern areas and District Mansehra and on the south by the District Buner. Climate of the valley is moderate, January is the coldest month and June is the hottest. Summer season temperature seldom rises 37°C. The annual rainfall ranges between 81-88 cm. River Swat is the main source of irrigation and it flows along the length of the valley. The valley has rich fields of rice, maize and wheat. Orchards of apricot, peaches, apples, oranges and walnut common throughout the valley, provides suitable feeding, breeding and nesting habitat to the indigenous and migratory birds.

Valley Swat is famous for floristically rich mountains. Although deforestation has caused great harm to the forests, but still it provides an ideal habitat for high altitude migratory and local birds. Broad leafed and conifer forests are common on the mountains. Among conifers *Cedrus deodara*, *Pinus vallisnerii*, *Picea smithiana*, *Pinus roxburghii* and *Pinus gerardiana* are common (Stewart, *Pakistan J. Forest.*, 4: 457-528, 1967; Beg, *Wildlife habitats of Pakistan*, Bull. No. 5, Pakistan Forest Institute, Peshawar, 1975).

Brief description and trivial names of the birds have been included for the benefit of the amateurs as well as professionals. The first part of this work has already been published (Muhammad *et al.*, *Sci. Khyb.*, 9: 93-102, 1996).

Ali and Ripley (*Handbook of the Birds of India and Pakistan*, vol. 19, Oxford University Press, New Delhi, 1968-1974) have been followed for birds identification. However, help has also been taken from Roberts (*Compact handbook of The birds of Pakistan*, vol. 1, and 2) for distribution, migration and status especially about the high altitude birds unapproachable for us.

This work will help in reviewing the existing database regarding birds of the valley Swat.

ENUMERATION OF THE BIRDS

1. *Alcedo atthis* Linnaeus
Small blue Kingfisher (E.*), Kir-keray, Mahi-khurak (Ver.**)
A small graceful kingfisher with a large head, short neck and stout bill. The bill is black, straight and pointed like a dagger. Often hover over open water and then suddenly dives when sees its prey (fish). Common on the banks of the River Swat and its tributaries.
2. *Alectoris chukar* J.E.Gray
Chukar or Rock Partridge (E.), Zarka (Ver.)
Common rounded looking game bird with vermilion legs and orange red bill. *Brown* in colour. Inhabits bare stony and dry hillsides and agricultural fields. Common in lower altitudes (2,100 metres) of the valley from winter till late spring, foraging on insects and seeds.
3. *Ammoperdix griseogularis* J.F .Brandt See Partridge (E.), Seesay (Ver.)
A small sized game bird, like small chukar in appearance. Buff in color with yellow legs and orange bill. The iris is bright yellow. Foraging on buds, green shoots and leaves, berries and insects. Common in late spring and summer in the valley in lower altitudes (2,000 metres) in agricultural fields in areas like Shamoza and Bunair.

4. *Apus apus* Linnaeus
Common Swift (E.), Gharaez Tothakarkay (Ver.)
It is with pale brown body coloration and comparatively larger in body size than other species. Plumage is pale brown. Gregarious in nesting and foraging. According to Roberts (1991) it can travel 160 km even in stormy weather and can sleep in the air. Commonly found in Kalam area upto Mankial on one side and Ushu on the other side.
5. *Apus melba* Linnaeus
Alpine Swift (E.), Zangalee Tothakarkay (Ver.)
Larger in size than common swift. The wings are long narrow, dark brown and pointed on the upper side. Gregarious in foraging, nesting and roosting. Forages on insects in the air. Found commonly in Marghuzar and Saidu Sharif areas.
6. *Apus affinis* J.E. Gray
House Swift or little Swift (E.), Tothakarkay or Tothakaray (Ver.)
The smallest in all the swift species with dorsally black body and forked tail. Ventrally the body is creamy white. Sexes are alike. Summer migrant. Gregarious in foraging, nesting and roosting. Forages upon insects in the air including honeybees. Mostly nests in cracks and holes in the walls and roofs of the buildings. Status common during spring and summer. Breeds in late spring.
7. *Aquila chrysaetos* Linnaeus
Golden Eagle (E.), Tapus (Ver.)
Dark brown or blackish in plumage. Bigger in size than the other eagles found in Pakistan with longer tail and wings. Females are larger in size than males. Often solitary soaring high overhead searching ground. Bird of prey. Occurs in higher altitudes, feeding upon hares, pigeons, snow cocks, chickens *etc.* Status: not common.
8. *Ardeola grayii* Sykes
Pond Heron (E.), Bugla (Ver.)
Small in size than night heron. Forages both day and night. Neck is short and bill is powerful, dark yellow and horny at the tip. Legs are olive green. The iris is bright golden yellow. The down cheeks are whitish. Feeding upon fish, crabs, molluscs, insects and tadpoles. Summer visitor to the valley and resides on the banks of River Swat and its tributaries. Status: common in summer.
9. *Cacomantis passerinus* Vahl
Grey-bellied Plaintive Cuckoo (E.), Koyal (Ver.)
It is a small gray-bellied cuckoo with a long tail and slimy body. The iris is brown and the legs and feet are brownish yellow. During flight a small white patch is conspicuous on the under surface of the wing. Secretive bird, call in early night and evening. Forage mainly on insects including caterpillars. Confined only to the side areas of Shangla Pass, the hill pass near Khwaza Kheila. Status: Not common.
10. *Ceryle rudis* Linnaeus
Pied Kingfisher (E.), Kir-kiray (Ver.)
A small kingfisher with a large head and short neck. The bill is black long, sharp, pointed and slightly down curved. The legs are small weak and greenish gray. It perches near water to watch prey (fish). If it sees a fish it at once goes into a vertical dive with wings closed. Exclusively forages on fish. Occurs along River Swat unto Bahrain. Status: not common.
11. *Columba livia* Gmelin
Rock Dove, Blue Rock Pigeon (E.), Bughdaday Koontara or Koontara (Ver.)
Inhabits low rocky mountains. It is thought to be ancestor of most of the domesticated pigeons. Mostly living in hills but flies to agricultural fields for foraging. Gregarious and occurs in flocks while roosting and foraging. Voracious in feeding habit, forages on seeds. Common throughout the valley.

12. *Coracias garrulus* Linnaeus
Kashmir Roller (E.), Sheen Tagh (Ver.)
Stout, graceful bird with a large head, short neck and a powerful curved bill. Blue, pale yellow and brick red feathers form the body plumage. Sexes are alike. It is a summer breeder visitor to the vale. Breeds in the holes, earth cliffs and tree trunks. Common during late spring and early summer.
13. *Coturnix coturnix* Linnaeus
Common Quail or Grey Quail (E.), Maraz (Ver.)
Small gray brownish rounded game bird with a short tail. It is a game bird and is domesticated by locals for fighting competitions. Migratory bird common in autumn, spring and summer. Occurring in lower altitudes throughout the valley. Status: common.
14. *Dendrocopus himalayansis* Jardine and Selby
Himalayan Pied Wood Pecker (E.), Thurkan (Ver.)
Found in low and higher elevations of the valley, foraging on insects and their larvae, ants, wood boring beetles and their larvae on the main tree trunk and branches. In males the crown is red but in females it is black. Limbs are greenish gray and irises are red brown. Breeds in holes in the main tree trunk under a lateral branch. Status: not common.
15. *Elanus caeruleus* Desfontaines
Black-winged or black shouldered Kite (E), Baakha (Ver.)
A small bird of prey with black wings and white throat. The iris is large red. The bill is black. Summer visitor, is also used as bait for capturing falcons. Feeds on diurnal rodents and reptiles and also insects like grasshoppers and locusts. Status: common.
16. *Francolinus francolinus* Linnaeus
Black Partridge (E.), Taroo (Ver.)
It is a comparatively large partridge. Blackish in colour with white margins, widely known for its call Subhan Tairi Qudrat. Sharing common habitat with gray partridge in lower altitudes. Foraging on seeds, young buds, shoots and insects. Status: common.
17. *Francolinus pondicerianus* Gmelin
Grey Partridge (E.), Tanzaray (Ver.)
Most abundant and favorite game bird. Brown in colour with a short thick tail, long thin neck with upright carriage while running on the ground. Occurring in the lower open, dry, rocky and bushy areas throughout the valley. Common in occurrence in Bunir and Shamoza areas.
18. *Glaucidium brodiei* Burton
Collard Pigmy Owllet (E.), Goungay (Ver.)
The smallest owl with large head and grey brown body plumage. Head is large for the size of the body. The legs are densely covered with white feathers. Active by late afternoon, can even be seen during day. Forages and roosts solitary. Status: rare.
19. *Halcyon smyrnensis* Linnaeus
White-throated Kingfisher (E.), Kir-kiray, Mahi-khurak (Ver.)
Small king fisher with a large bill. Head is chocolate or maroon brown in color, the body is with a white patch from the base of the lower mandible down to the center of the breast. The bill and legs are dull dark red in colour. It occurs along the sides of River Swat and its tributaries from lower Swat till Madyan in upper Swat. Often sits on trees and bushes in search of prey near water from where it dives down at an angle to catch the prey, forages on insects, grasshoppers, crabs, crickets *etc.* Pashtu name is because of its voice kir-kir-kir. Status: rare.
20. *Hieraaetus pennatus* Gmelin
Booted Eagle (E.), Batoor (Ver.)
Bird of prey, presence of small whitish patches at the base of each wing visible on the dorsal surface is a diagnostic feature. Scarce bird, occurring in high altitudes. Competing with golden eagle for almost the same prey. Status: rare.

21. *Hierococcyx varius* Vahl
Common Hawk Cuckoo (E.), head fever bird, Koyal (Ver.)
Hawk looking migratory bird, familiar for its sweet calls. Spring and summer visitor, occurring in lower altitudes. Never builds its own nest and prefers to lay eggs in the nest prepared by other birds. Foraging upon a variety of insects. Status: rare.
22. *Lerwa lerwa* Hodgson
Snow Partridge (E.). Zangalee Charg (Ver.)
Medium sized bird. Occurs in alpine and sub-alpine pastures. Upper parts of the body are black and white in plumage while lower parts are reddish brown. Bill and legs are bright red. Found in Kalam, Mankial and Mahodhand areas foraging upon lichens, mosses and small buds. Status: rare.
23. *Lophophoros impejanus* Latham
Himalayan Monal Pheasant, Lhate, Murghezareen (Ver.)
The biggest and heaviest among pheasants. The head has a crest of green feathers. The bill is strong and down-curved. Sexual dimorphism is present. Male is brighter while female is dull in plumage. Inhabits the highest elevation in the temperate conifer forest and alpine meadows along the tree line. Found in the heights of Matta range, Shangla Pass, Malam Jabba, Kalam, Miandam, Ushu and Mankial areas. Status: rare.
24. *Merops apiaster* Linnaeus
Bee-eater (E.). Mashee Khurak (Ver.)
A graceful bird with central tail feathers pinpointed and shorter, has a heavy black eye stripe, yellow throat encircled by a narrow black lining joining the eye. Crown is greenish white and the breast is greenish. Legs are small, weak and brown. Bill is stout pointed down and black. Catches insects in the air and on the ground. Found in lower Swat around Mingora during summer. Status: rare.
25. *Nycticorax nycticorax* Linnaeus
Night Heron (E.), Bugla (Ver.)
Nocturnal in feeding activity. It has a large head, short neck, stout bill and large eyes. The large eyes are an adaptation to nocturnal feeding activity. Bill is black while legs are pinkish green or yellowish. Gregarious in roosting, roost by day in large chinar trees or other trees on the bank of River Swat. When dusk they become active for hunting. Found along the banks of River Swat unto Khwazakheila. Status: rare.
26. *Otus scops* Linnaeus
Eurasian Scops Owl (E.), Goungay (Ver.)
Nocturnal with conspicuous ear tufts, occurring in low and high altitudes of the vale. Plumage is pale brown. The irises are yellow and the bill is darker horny. Nocturnal in habit, remains silent during day. Status: common, can be seen in moon light with its peculiar calls.
27. *Psittacula eupatria* Linnaeus
Large Indian Parakeet (E.), Totti or Kamacal Totti (Ver.)
Larger of all the parakeets visiting the vale, predominantly green with an extra long tail, maroon red patch on shoulder, orange red and powerful bill. Summer visitor in fruit season. Gregarious, status: common.
28. *Psittacula himalayana* Lesson
Slaty-headed Parakeet (E.), Spin Saray Totii (Ver.)
Larger in size than *Psittacula krameri*, with grass green body and yellowish on the breast. Head is slaty in colour, which is a diagnostic feature. Found rare in areas around Saidu Sharif and Marghuzar, foraging upon seeds berries and fruits.
29. *Psittacula krameri* Scopoli
Rose-ringed Parakeet (E.), Acil Totti or Totii (Ver.)
Very intelligent bird, can learn talking like humans therefore, is also petted. Prefers to

- talk with children and elder women. Occurs in pairs and nests in old tree trunks. The collar is formed by a ring of rose coloured feathers, hence the name rose-ringed. Summer migrant to the vale. Status: common.
30. *Pucrasia macrolopha biddulphi* Marshall
Koklass Pheasant (E), Zangali Charge (Ver.)
Medium sized most abundant pheasant. Legs are long gray and with a curved spur. Occurring in moist temperate forests. The cock is light green and white in colour. The cock head is green with white ear tufts and a large crest (about 10 cm) of green feathers. Female is dull coloured with a small crest. Inhabits temperate coniferous forests of Marghuzar, Islampur, Malam Jabba, Kalam area and Eelum Hills above Barikot Area from about 5,400 to 9,500 feet elevation. A local hunter party shot one cock in the Eelum Hills in the end of July 1994. Roberts (1991,92) has not been reported the Koklass pheasant from this area. Status: rare.
31. *Picus squamatus* Vigors
Scaly-bellied green Woodpecker (E.), Megi-khurak (Ver.)
Green in colour with larger head and straight bill. The bill is horny and yellow in colour. Bristles cover the nostrils. The iris is pink and feet are stout. Long protrusible tongue is used for foraging ants by chiseling and hammering into bark crevices of tree trunk and branches. Also descend to the ground for foraging. Status: rare.
32. *Streptopelia chinensis* Scopoli
Spotted Dove or Chinese Dove (E.), Kana Kautara (Ver.)
Smaller in size than *Columba livia*. Summer visitor, often solitary, spotted with round head and blackish weak bill and long tail. Legs are pinkish red. According to Roberts (1991) it migrates from China. The instrument used by local hunters for hunting this dove is catapult and air gun. Abundantly found in summer in trees surrounding agricultural fields in the vale, foraging upon seeds, buds and berries.
33. *Streptopelia orientalis* Latham
Oriental Turtle Dove (E.), Kourkoray Kautara (Ver.)
Large in size than *Streptopelia turtur*. The sides of the neck has blue-grey and black feathers in a chequer-board pattern. The iris is orange with a purple orbital ring of bare skin. Cere is purple pink while legs and feet are carmine. Often solitary. It is a shy and secretive bird, fly to the tree and remains there till not disturbed. Forages on buds, herbs, grains, berries and seeds scattered on ground. Spring visitor and stay till late summer. Status: common.
34. *Streptopelia senegalensis* Linnaeus
Little Brown Dove (E.), Kharay Kautara (Ver.)
The smallest dove with brown plumage. The English and Pashtu names are because of its plumage. It has a slimy long body with a long tail. The irises are dark brown and the legs and feet are purple red while the bill is black. Spring visitor and remain in the valley till late summer. Nests in the holes in the old tree trunks, foraging upon seeds, grains, grasses and young buds. Status: common.
35. *Streptopelia turtur* Linnaeus
Western Turtle Dove (E.), Kourkoray Kautara (Ver.)
This is a slender bodied smaller dove with a long tail. Smaller in size than *Streptopelia orientalis*. Irises are orange and feet are crimson-red. Bill is purplish black. The naked orbital ring is reddish purple. It is largely a ground feeding species gleaning grains from cultivated crops as well as weed, seeds and buds. Status: common in spring and summer.
36. *Strix aluco* Linnaeus
Tawny Owl (E.) Ghat Goungay (Ver.)
Very large in size when compared with other owls of the vale. Plumage is gray. Head is round lacking ear tufts. The irises are dark brown and the area above the eyes is white.

Forest dwelling species and is confined to colder mountain ranges around Kalam. Status: rare.

37. *Tetraogallus himalayensis* G.R.Gray
Himalayan Snow Cock or Ram Chukar (E.), Charge (Ver.)
Game bird larger in size than a large chicken. It has a powerful down-curved gray bill and stout orange legs. A small area of bare orange or yellow skin surrounds the eye. Occurring rare in alpine pastures from 12,000 to 20,000 feet elevations. Forages on grasses and buds.
38. *Upupa epops* Linnaeus
Hoopoe (E.), Mula-charghak (Ver.)
Stout graceful bird, summer visitor, breeds in the holes, earth cliffs and tree trunks. Peculiar feature is the presence of an erectile crest on the head. The crest is erected particularly when disturbed. Insectivorous, digging in feeding habits. Digs the ground by its strong bill as it walks along. Sexes are alike. Although Roberts (1991) has not noted it from Swat but according to authors the birds is common in summer around Shamoza, Kabal and Barikot areas. Status: common.

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NEW RECORD OF TWO FRUIT FLIES (TEPHRITIDAE: DIPTERA) SPECIES FROM PAKISTAN

Abstract.- Fruit flies are not only important fruit pest but also quarantine pest and play an important role in making intelligent plant quarantine decisions. In this study two species of fruit flies are recorded from Pakistan for the first time.

Key words: Fruit flies, Dacines, Tephritidae, Diptera, Pakistan

Beside direct losses, fruit fly infestation is a major trade barrier, resulting in the indirect economic losses to the growers. The quarantine regulations imposed by importing countries, especially developed countries, either ban a producing country from a potential export market, or insist on effective dis-infestation of fruit grown in areas with fruit fly, ultimately increasing the cost of production (Singh, Ecological consideration in eradicating exotic fruit fly introductions. In: *Proceedings, 1st International symposium on fruit flies in the tropics* (eds. S. Vijaysegaran and A.G. Ibrahim), pp. 11-29, Kuala Lumpur, 1988, Malaysian Agriculture Research and Development Institute, Kuala Lumpur, 1991). Recently Japan has established a Vapour Heat Treatment Plant in Pakistan, for treating mango fruit under supervision of Japanese experts to enable its export in Japan. Such treatments not only increase the cost of production but also decrease the shelf life. Beside these losses, many fruits cannot be freely exported to such lucrative markets like USA, Japan and Australia, because of strict quarantine regulations in these countries thus prohibiting entry of fresh fruit from fruit flies infested areas. Therefore fruit flies are major obstacles in development of fruit industry in developing countries.

With the increase in international air travel and transport, there has been a consequent rise in the introduction of exotic fruit fly species. Nine species of fruit flies have been introduced in California (USA) in the last ten years (Liquido and Cunningham, Ecological consideration in eradicating exotic fruit fly introductions. In: *Proceedings, 1st International symposium on fruit flies in the tropics* (eds. S. Vijaysegaran and A.G. Ibrahim), pp. 235-241, Kuala Lumpur, 1988. Malaysian Agriculture Research and Development Institute, Kuala Lumpur, 1991) and four in Hawaii (USA.) (Vargas and Nishida, Ecological consideration in eradicating exotic fruit fly introductions. In: *Proceedings, 1st International symposium on fruit flies in the tropics* (eds. S. Vijaysegaran and A.G. Ibrahim), pp. 242-250, Kuala Lumpur, 1988. Malaysian Agriculture Research and Development Institute, Kuala Lumpur, 1991). *Bactrocera carambolae* Drew &

Hancock, a pest species in South East Asia has been introduced to South America (Surinam and French Guinea) (S. Muller, pers. comm.). Fruit flies have high probability of being introduced into new areas without strict enforcement of quarantine regulation.

Materials and methods

Plastic traps containing a mixture cue lure and chlorpyrifos, methyl eugenol and chlorpyrifos (in 95:5) on cotton were placed in fruit orchard in Barani Agricultural Research Institute, Chakwal. The traps were hung with fruit trees about 5-6 feet high. The data of fruit flies were recorded daily. The collected flies were pinned, mounted and identified to species level. The specimens were deposited in insect repository of Pakistan Museum of Natural History, Islamabad.

Results and discussion

Some already known species and common species *Bactrocera (Bactocera) zonata* (Saunders), *Bactrocera (zeugodacus) cucurbitae* (Coq.) and *Bactrocera (Bactrocera) dorsalis* (Hendel) were recorded. While two species of fruit flies given below are the first record from Pakistan. These species were already known from India.

1. *Bactrocera (Zeugodacus) duplicata* (Bezzi)
[(Synonymy and description of important taxonomic characters is given by Mahmood and Hassan (*Pakistan J. Zool. Suppl. Ser. 7*, 2005)].

Male specimens of this species are attracted to cue lure.

Material examined: Pakistan

BARI, Chakwal, 1 male, 24.vi.2004, 2 males, 28.viii.2004, 5 males, 30.viii.2004, 5 males, 31.viii.2004.

2. *Bactrocera (Zeugodacus) signata* (Hering)
[(Synonymy and description of important taxonomic characters is given by Mahmood (*Pakistan J. Zool.*, **31**: 219-235, 1999)]

Male specimens of this species are also attracted to cue lure.

Material examined: Pakistan

BARI, Chakwal, 1 male, 24.vi.2004, 2 males, 28.viii.2004, 5 males, 30.viii.2004, 5 males, 31.viii.2004.

These species already known from India previously and have been first time recorded from Pakistan recently. It will be question to answer either these species already existed or introduced to Pakistan. If these species of fruit flies are introduced in Pakistan, then authorities need to implement the quarantine law strictly. Pakistan is already facing strict quarantine regulations from Japan and USA for the import of mango in these countries. Pakistan is currently importing fruits like grapes and pears from China. Chinese citrus fly *Bactrocera minax* (an important pest of citrus fruits in China and northern India) could be a possible threat to our kinnow (horticultural industry), without strict enforcement of quarantine laws.

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