

Research Article	Pak-Euro Journal of Medical and Life Sciences
DOI: 10.31580/pjmls.v8i5.p3.3488	Copyright © All rights are reserved by Corresponding Author
Vol 8 No. Special 3, 2025-26: pp. S141-S152	
www.readersinsight.net/pjmls	Revised: March 07, 2026 Accepted: March 25, 2026
Submission: December 25, 2025	Published Online: March 31, 2026

CURRENT STATUS OF WILDLIFE IN TEHSILS OF DISTRICT KECH

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Abstract

In the southwest of the province of Balochistan, the district Kech is located and is known as the 4th warmest region of the Earth. Kech District has been divided into 4 tehsils, namely Turbat, Tump, Buleda and Dasht. Each tehsil has different climatic conditions based on its geographical location. The current study was aimed at assessing the current status of wildlife in the tehsils of District Kech. The study was conducted in 4 tehsils, and data collection was carried out in these tehsils, followed by taxonomic identification. During a 1-year survey period, the total number of examined chordate species was 44, in which the species of mammals, aves and reptiles were 18, 18 and 8, respectively. In mammalian fauna, the order Carnivora was dominated by 7 species, followed by the order Artiodactyla with 4 species. In avian fauna, the order Passeriformes was dominated by 5 species, followed by the order Galliformes with 4 species, while in reptilian fauna, the order Squamata was dominated by 7 species. In Kech district, the highest number of vertebrate families and species (29 and 37) was recorded in Dasht Tehsil, followed by Tehsil Turbat (24 and 30) and Tehsil Buleda (24 and 28). The lowest numbers were recorded in Tump Tehsil (17 families and 19 species).

Keywords: Balochistan, Biodiversity assessment, Conservation status, District Kech, Tehsils of Kech, Vertebrate fauna, Wildlife distribution.

INTRODUCTION

In the southwest of Pakistan, Balochistan, the largest province, is situated, covering a total area of 348,189 km² (1). This province is located between 24°32'N and 60°70'E (2). To its north and northwest lies Afghanistan, to its southwest Iran, to its south the Arabian Sea and to its east the provinces of Punjab and Sindh, while to its northwest lie KPK and FATA (3). An arid climate is one of the unique features of Balochistan and on the basis of this characteristic, the province is classified into four climatic regions: hyper-arid, arid, semi-arid and dry (4). Due to variations in climate and topography, this province features a wide variety of ecosystems, landforms and habitats (5). A high diversity of vertebrate fauna is found here; therefore, it is considered a transitional zone between the Oriental and Palearctic regions. A total of 71 species of mammals, 365 species of birds, 94 species of reptiles, 8 species of amphibians and 61 species of freshwater fishes are found here. There are two national parks, 14 wildlife sanctuaries, 8 game reserves, 5 private game reserves and 1 community conservation area in Balochistan (Fig. 1) (6).

Kech district extends from 25°-24' to 26°-39' North latitude and from 61°-49' to 64°-31' East longitude. In Balochistan, Kech is located in the southwest (7). This district occupies a total landmass of 22539 km² (8). It is among the hottest regions in South Asia and is recognized as the 4th warmest area of the world (9). Due to the presence of a hot and dry climate, it is categorized as a "hot summer and mild winter" region. In Kech District, summer temperatures reach up to 44°C, while winter temperatures drop to around 10°C. The rainy season is uncertain with insufficient rainfall (below 250mm/year) (10). The climate is arid, the soil is sandy and the region is topographically mountainous (11).

The former name of district Kech was Turbat, but it was renamed Kech in 1994-1995 (12). The name of this district was derived from the Kech River, while the name Turbat (graveyard) was given due to the extreme heat during summer (13). Kech is one of the geographically significant districts of Balochistan province and is socio-politically considered the core of Makran division. There are three districts in the Makran division, namely Gwadar, Kech and Panjgur. Panjgur is located to its north, Awaran to its east and



Gwadar to its south. Kech district has been divided into 4 subdivisions, namely Turbat, Tump, Buleda and Dasht. Turbat is the Headquarter of Kech district (Fig. 2) (14).

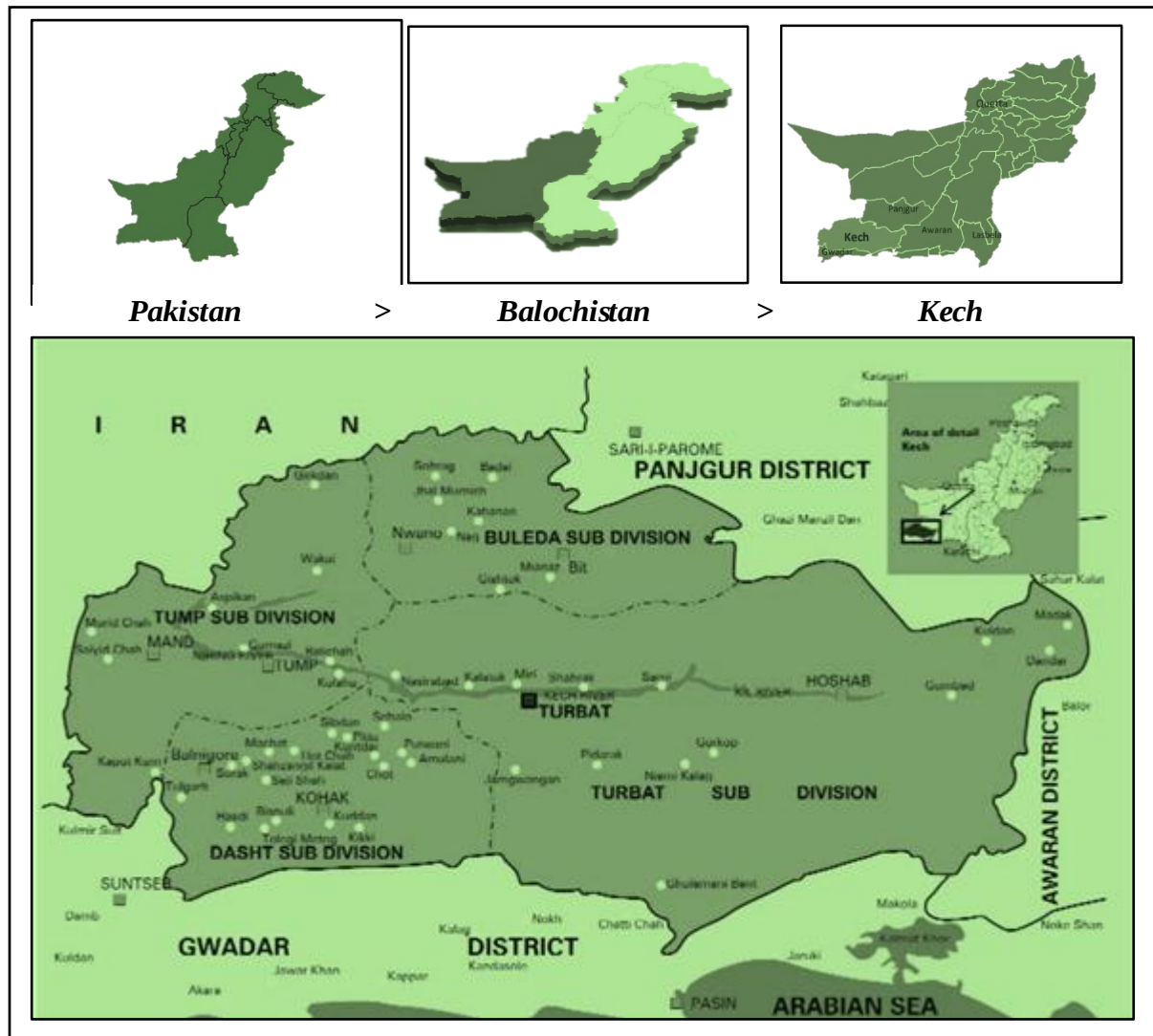


Fig. 1. Geographical location of the study area showing Pakistan, Balochistan Province, District Kech and the four study tehsils (Buleda, Dasht, Turbat and Tump) included in the survey

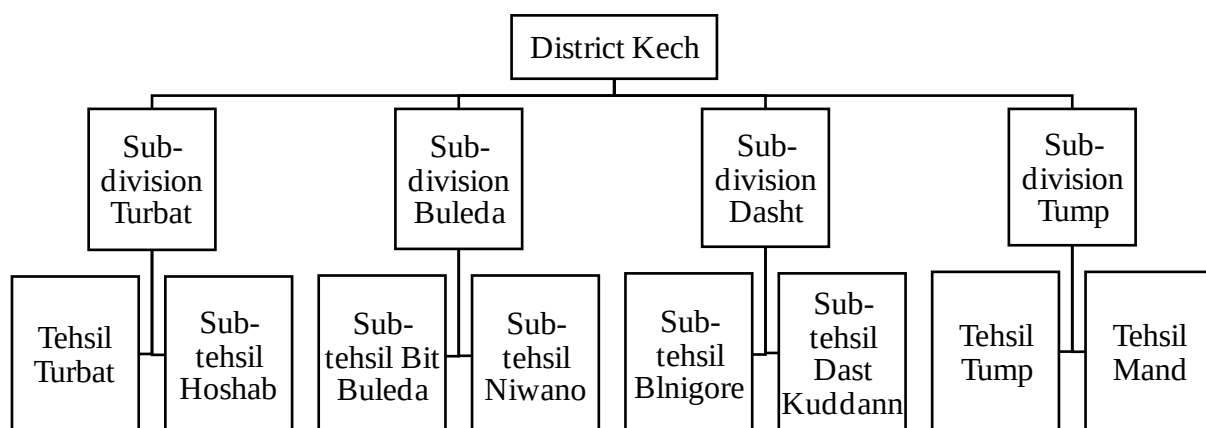


Fig. 2. Administrative divisions of District Kech showing its four sub-divisions (Buleda, Dasht, Turbat and Tump) and their respective tehsils (Turbat, Hoshab, Bit Buleda, Niwano, Blnigore, Dast Kuddann, Tump and Mand)

The climate of Tehsil Turbat is extremely hot and arid, with a sub-tropical climate characterized by extremely hot summers, mild winters, cooler temperatures and minimal rainfall. Tehsil Buleda is mountainous and cooler than Turbat, with an arid to sub-tropical climate. Tehsil Dasht is a vast, open and dry area with an arid or semi-arid climate, characterized by long, hot and dry summers and short, mild winters, making it a harsh environment. Tehsil Tump, located on Iranian Border, also has a hot and dry climate and is covered by mountains and deserts. The sub-division of Turbat is further classified into Turbat

Tehsil and sub-tehsil Hoshab. The sub-division of Buleda is divided into sub-tehsils Bit Buleda and Niwano. The sub-division of Dasht is divided into sub-tehsils Balnigore and Dast Kuddan. The sub-division Tump is further divided into Tehsil Tump and Tehsil Mand (15).

METHODOLOGY

STUDY AREA

The study was conducted in all four tehsils (Buleda, Dasht, Turbat and Tump) of Kech District, Balochistan, over a one-year period from July 2024 to July 2025. To ensure comparable sampling effort across the study area, all four tehsils were surveyed using the same survey design and a rotational sampling schedule. Field surveys were carried out on a weekly rotational basis, with each tehsil visited for 2-3 days before surveys were shifted to another tehsil in the following week. During each survey day, approximately 2-3 hours were spent collecting data, depending on the season. The distance covered during each survey varied according to the field conditions and mode of observation, as data were collected through both walking transects and observations made from a moving vehicle. To ensure comprehensive coverage, the same study sites were revisited multiple times throughout the study period. This repeated-survey approach enabled the collection of reliable data across different seasons throughout the year. Kech district is situated in the southwestern part of Balochistan province.

MATERIALS

The materials used in the study included binoculars (to observe distant vertebrates), a high-magnification zoom camera/mobile camera (to capture chordate images from a distance), a Global Positioning System (GPS) device (for determining location, navigation, tracking and mapping), a light source/torch (to observe snakes or other animals in caves, holes or burrows), nets, traps, snakes sticks and hooks (for capturing snakes), long forceps (for handling venomous snake heads), sound identification tools (for recognizing the sound of chordates, especially birds), trail cameras (for video recording), fodder (for attracting mammals and birds), a watch (for recording time) and a notebook (for recording common names).

DATA COLLECTION

Data were collected from a wide range of habitats across all four tehsils of Kech District, including gardens, hills, mountains, plains, sandy areas, cliffs, and valleys, damp and shaded areas to ensure comparable sampling coverage. However, access to certain areas within Tehsil Tump was restricted during the study period, preventing surveys in those areas. Both direct and indirect methods of data collection (photographing and observing animals) were applied. Data collection was mostly carried out in the morning, at noon and in the afternoon depended on weather conditions. For diurnal mammalian chordates, the field traps were set in the morning and direct methods of data collection were applied. For nocturnal mammalian chordates, live traps were used and indirect data collection methods, such as, observing footprints or other markings, fecal material, territory marking signs and the presence of burrows and holes were used to record the presence of chordates during field visits and active sampling periods. For reptilian fauna, stone turning, searching through bushes, observing large trees, checking streams and turning over scattered debris accumulated under trees were applied. For migratory and native avian fauna, direct methods of data collection (photographing from a distance) and various traps were used across all habitats. At least four individuals participated in data collection, including local volunteers from respective tehsils and personnel from the Wildlife Department, who provided valuable information on species occurrences within the study area.

TAXONOMIC IDENTIFICATION OF SPECIES

The next step was the taxonomic identification of mammals, aves and reptilian fauna of Kech district through the Automated Species Identification (ASI) System. In this study, the ASI system was used as a supportive tool for the preliminary identification of species from field photographs and audio/visual



records by matching observations with a reference database of verified species. The system provides preliminary identifications and should not be considered full accurate without verification. Therefore, all ASI generated identifications were cross-checked using morphological identification keys and field identification guides, while doubtful recorded were further verified through expert consultation. Consequently, the ASI system was used only for initial screening and final species identification was confirmed through standard taxonomic verification procedures and expert validation where necessary. After identification, the common name, scientific name, order and family of all collected mammals, aves and reptiles were determined.

RESULTS

During the one-year survey, we examined a total of 44 species of mammals, aves and reptiles, in which 18 species were mammals, 18 species were birds and 8 species were reptiles (Table I). The results were summarized in tabular form, showing the frequencies and distribution of species across the study area. In the mammalian fauna, 4 species of the order Artiodactyla were recorded belonging to 2 families (Bovidae and Suidae), 1 species of the order Perissodactyla was recorded belonging to the family Equidae, 7 species of the order Carnivora were recorded belonging to 3 families (Felidae, Canidae and Herpestidae), 2 species of the order Eulipotyphla were recorded belonging to 2 families (Erinaceidae and Soricidae), 2 species of the order Rodentia were recorded belonging to 2 families (Hystricidae and Sciuridae), 1 species of the order Lagomorpha was recorded belonging to the family Leporidae and 1 species of the order Chiroptera was recorded belonging to the family Rhinolophidae. In mammals, the order Carnivora was dominated in the Kech District with 7 species, followed by the order Artiodactyla with 4 species. In the avian fauna, 4 species of the order Galliformes were recorded belonging to the family Phasianidae, 1 species of the order Otidiformes was recorded belonging to the family Otididae, 5 species of the order Passeriformes were recorded belonging to 5 families (Emberizidae, Sturnidae, Passeridae, Muscicapidae and Alaudidae), 1

Table I. Number of species of Mammals, Aves and Reptiles

Chordate					
Mammals		Aves		Reptiles	
Order	No. of spp.	Order	No. of spp.	Order	No. of spp.
Artiodactyla	4	Galliformes	4	Squamata	7
Perissodactyla	1	Otidiformes	1	Crocodylia	1
Carnivora	7	Passeriformes	5		
Eulipotyphla	2	Bucerotiformes	1		
Rodentia	2	Accipitriformes	1		
Lagomorpha	1	Pelecaniformes	1		
Chiroptera	1	Strigiformes	1	Total	8
		Columbiformes	2		
		Pteroclitiformes	1		
Total	18	Coraciiformes	1		
		Total	18		

species of the order Bucerotiformes was recorded belonging to the family Upupidae, 1 species of the order Accipitriformes was recorded belonging to the family Accipitridae, 1 species of the order Pelecaniformes was recorded belonging to the family Ardeidae, 1 species of the order Strigiformes was recorded belonging to the family Strigidae, 2 species of the order Columbiformes were recorded belonging to the family Columbidae, 1 species of the order Pteroclitiformes was recorded belonging to the family Pteroclitidae and 1 species of the order Coraciiformes was recorded belonging to the family Coraciidae. In the avian fauna, the order Passeriformes was dominated in the Kech District with 5 species, followed by the order Galliformes with 4 species and Columbiformes with 2 species. In the reptilian fauna, 7 species of the order Squamata were recorded belonging to 6 families (Agamidae, Viperidae, Gekkonidae, Boidae, Varanidae and Colubridae) and 1 species of the order Crocodylia was recorded belonging to the family Crocodylidae. In

reptiles, the order Squamata was dominated in the Kech district with 7 species, followed by the order Crocodylidae with 1 species.

In Tehsil Buleda, a total of 24 chordate families were found, of which 8 were mammalian, 11 were avian and 5 were reptilian. In Tehsil Dasht, a total of 29 chordate families were found, of which 10 were mammalian, 13 were avian and 6 were reptilian. In Tehsil Turbat, a total of 24 chordate families were found, of which 10 were mammalian, 9 were avian and 5 were reptilian. However, in Tehsil Tump, 17 chordate families were observed, of which 8 were avian, 5 were mammalian and 4 were reptilian (Table VI). In District Kech, the highest numbers of chordate families were recorded in Tehsil Dasht with 29 families, followed by Buleda and Turbat tehsils with 24 families each. The lowest number of chordate families was observed in Tehsil Tump with 17 families.

In Tehsil Buleda, a total of 28 species of vertebrates were recorded, of which 11 were mammals, 12 were aves and 5 were reptiles. In Tehsil Dasht, a total of 37 species of vertebrates were recorded, of which 12 were mammals, 18 were aves and 7 were reptiles. In Tehsil Turbat, a total of 30 species of chordates were recorded, of which 13 were mammals, 12 were aves and 5 were reptiles. In Tehsil Tump, a total of 19 species of chordates were observed, of which 5 were mammals and 4 were reptiles and 10 were aves (Table VII). In Kech district, the highest number of vertebrate species was recorded in Tehsil Dasht with 37 species, followed by Tehsil Turbat with 30 species and Tehsil Buleda with 28 species. The lowest number of chordate species was recorded in Tehsil Tump with 19 species.

Table II highlights the mammalian diversity of Kech District, categorized by taxonomic order and family along with their scientific and common names. It also shows the distribution of each mammalian species across different tehsils of Kech District and their conservation status according to IUCN Red List. The presence of species in each tehsil is indicated using check marks, highlighting variation in species distribution across study area.

Table II. Mammals of Kech District along with their IUCN status

Order	Family	Common name	Scientific name	Locality in tehsils of Kech				IUCN status
				Buleda	Dasht	Turbat	Tump	
Artiodactyla	Bovidae	Sindh ibex	<i>Capra aegagrus</i>	✓		✓		NT
		Chinkara or	<i>Gazella bennettii</i>	✓	✓	✓		LC
		Indian gazelle						
		Afghan urial	<i>Ovis vignei</i>			✓		VU
Perissodactyla	Suidae	Wild boar	<i>Sus scrofa</i>		✓			LC
	Equidae	Indian wild ass	<i>Equus hemionus khur</i>	✓				NT
		Jungle cat	<i>Felis chaus</i>		✓			LC
		Sand cat	<i>Felis margarita</i>		✓			LC
Carnivora	Felidae	Persian leopard	<i>Panthera pardus</i>			✓		VU
		Indian/Grey wolf	<i>Canis lupus</i>	✓				LC
		Golden jackal	<i>Canis aureus</i>	✓	✓	✓	✓	LC
		Red fox	<i>Vulpes vulpes</i>	✓	✓	✓		LC
	Herpestidae	Indian grey mongoose	<i>Herpestes edwardsii</i>	✓	✓	✓	✓	LC
Eulipotyphla	Erinaceidae	Afghan hedgehog	<i>Hemiechinus auritus</i>		✓	✓	✓	LC
	Soricidae	Asian house shrew	<i>Suncus murinus</i>			✓		LC
Rodentia	Hystriidae	Indian crested porcupine	<i>Hystrix indica</i>	✓	✓	✓		LC
		Northern palm squirrel	<i>Funambulus pennantii</i>	✓	✓	✓	✓	LC
Lagomorpha	Leporidae	Cape hare	<i>Lepus capensis</i>	✓	✓	✓		LC
Chiroptera	Rhinolophidae	Greater horse shoe bat	<i>Rhinolophus ferrumequinum</i>	✓	✓	✓	✓	LC

*Keys of IUCN status: NT = Near Threatened, VU = Vulnerable, LC = Least Concern

Table III represents the avian fauna of Kech District, organized according to taxonomic orders and families with their corresponding common and scientific names. It further presents the occurrence of each species across the tehsils of Kech, together with their IUCN Red List conservation status. Species presence

within each tehsil is denoted by check marks, reflecting differences in distribution patterns across study area.

Table III. Aves of Kech District along with their IUCN status

Order	Family	Common name	Scientific name	Locality in tehsils of Kech				IUCN status
				Bule da	Dasht	Turbat	Tump	
Galliformes	Phasianidae	See-see partridge	<i>Ammoperdix griseogularis</i>	✓	✓	✓	✓	LC
		Grey partridge	<i>Francolinus pondicerianus</i>	✓	✓	✓	✓	LC
		Black partridge	<i>Francolinus francolinus</i>		✓			LC
		Common quail	<i>Coturnix coturnix</i>		✓	✓		LC
		Houbara bustard	<i>Chlamydotis macqueenii</i>		✓			VU
Passeriformes	Emberizidae	Black-headed buntings	<i>Emberiza melanocephala</i>	✓	✓			LC
	Sturnidae	Common myna	<i>Acridotheres tristis</i>	✓	✓	✓	✓	LC
	Passeridae	House sparrow	<i>Passer domesticus</i>	✓	✓	✓	✓	LC
	Muscicapidae	Nightingale	<i>Luscinia megarhynchos</i>	✓	✓	✓	✓	LC
	Alaudidae	Crested lark	<i>Galerida cristata</i>	✓	✓	✓		LC
Bucerotiformes	Upupidae	Eurasian hoopoe	<i>Upupa epops</i>	✓	✓	✓	✓	LC
Accipitriformes	Accipitridae	Indian griffon vulture	<i>Gyps fulvus</i>		✓			LC
Pelecaniformes	Ardeidae	Grey heron	<i>Ardea cinerea</i>		✓			LC
Strigiformes	Strigidae	Spotted owl	<i>Athene brama</i>	✓	✓	✓	✓	LC
Columbiformes	Columbidae	Laughing/Senegal dove	<i>Spilopelia senegalensis</i>	✓	✓	✓	✓	LC
		Rock dove/pigeon	<i>Columba livia</i>	✓	✓	✓	✓	LC
		Chestnut-bellied sand grouse	<i>Pterocles exustus</i>	✓	✓	✓	✓	LC
Coraciiformes	Coraciidae	Indian roller	<i>Coracias benghalensis</i>		✓			LC

*Keys of IUCN status: NT = Near Threatened, VU = Vulnerable, LC = Least Concern

Table IV provides a structural account of the reptilian fauna of Kech District, arranged by taxonomic order and family along with their common and scientific names. It also indicates the distribution of each species across the various tehsils of Kech. In addition, the table includes the conservation status of each species as listed by the IUCN Red List. Species occurrence in each tehsil is shown using check marks, highlighting variations in their spatial distribution throughout the study area.

Table V summarizes the mammalian, avian and reptilian fauna that were recorded during survey in Kech District. A total 44 species were observed, including 18 species of mammals, 18 species of aves and 8 species of reptiles. In mammalian, avian and reptilian fauna the dominated orders were Carnivora, Passeriformes and Squamata.

Table IV. Reptiles in Kech District along with their IUCN status

Order	Family	Common name	Scientific name	Locality in tehsils of Kech				IUCN status
				Buleda	Dasht	Turbat	Tump	
Squamata	Agamidae	Oriental garden lizard	<i>Calotes versicolor</i>	✓	✓	✓	✓	LC
		Saw scaled viper	<i>Echis carinatus</i>	✓	✓	✓	✓	LC
	Viperidae	Persian horned viper	<i>Pseudocerastes persicus</i>		✓			LC
		House gecko	<i>Hemidactylus flaviviridis</i>	✓	✓	✓	✓	LC
	Varanidae	Desert monitor	<i>Varanus griseus</i>	✓	✓	✓	✓	LC
	Boidae	Indian sand boa	<i>Eryx johnii</i>		✓			NT
	Colubridae	Glossy-bellied racer	<i>Platyceps ventromaculatus</i>	✓				LC
Crocodylia	Crocodylidae	Marsh crocodile	<i>Crocodylus palustris</i>		✓	✓		VU

*Keys of IUCN status: NT = Near Threatened, VU = Vulnerable, LC = Least Concern

Table V. Number of species of mammals, aves and reptiles

Chordate					
Mammals		Aves		Reptiles	
Order	No. of spp.	Order	No. of spp.	Order	No. of spp.
Artiodactyla	4	Galliformes	4	Squamata	7
Perissodactyla	1	Otidiformes	1	Crocodylia	1
Carnivora	7	Passeriformes	5		
Eulipotyphla	2	Bucerotiformes	1		
Rodentia	2	Accipitriformes	1		
Lagomorpha	1	Pelecaniformes	1		
Chiroptera	1	Strigiformes	1	Total	8
		Columbiformes	2		
		Pterocliiformes	1		
Total	18	Coraciiformes	1		
		Total	18		

Table VI illustrates the number of mammalian, avian and reptilian families that were found in tehsils of Kech District. The most common avian families were found in Dasht and Buleda tehsils (13 and 11, respectively). The highest number of mammalian families were found in Dasht and Turbat tehsils (10 and 10, respectively), while the highest number of reptilian families were found in Tehsil Dasht (6).

Table VI. Number of mammalian, avian and reptilian families found the tehsils of Kech District

Tehsils	Chordate families			Total
	Mammalian	Avian	Reptilian	
Buleda	8	11	5	24
Dasht	10	13	6	29
Turbat	10	9	5	24
Tump	5	8	4	17

Table VII demonstrates the number of mammalian, avian and reptilian species found in the tehsils of Kech District. Mammalian species were predominated in Turbat and Dasht tehsils (13 and 12, respectively). Avian and reptilian species were most commonly found in Dasht Tehsil (18 and 7).

Table VII. Number of mammalian, avian and reptilian species found in tehsils of Kech District

Tehsils	Chordate species		Total	
	Mammalian	Avian	Reptilian	
Buleda	11	12	5	28
Dasht	12	18	7	37
Turbat	13	12	5	30
Tump	5	10	4	19

**Fig. 3.** Representative mammalian, avian and reptilian fauna recorded during field surveys in District Kech, Balochistan, Pakistan

DISCUSSION

Each environment has its own biodiversity, which is determined by the ecological advantages it offers. The territory of Pakistan is composed of several biological and climatic variables. Unique wildlife is found in Pakistan and according to different studies, at least 668 species and sub-species of mammals, 668 species of birds and 200 species of reptiles are known to exist in Pakistan (16). The province of Balochistan has a distinctive topography; therefore, this province is considered an ideal and unique home for many migratory bird and mammalian species (17). A total of 92 mammalian species, 373 avian species and 120 reptilian species are found in Balochistan (18).

The biodiversity of Balochistan province encounters serious threats such as, habitat loss, animal migration, genetic alteration, deforestation, the introduction of exotic species, adverse weather conditions, poaching, increased tourism and the poor performance of the wildlife conservation department. As a result of these factors, many previously common species have become rare and endangered (19, 20). Among the 44 mammalian, avian and reptilian species recorded in Kech District, 37 species were categorized as Least Concern (LC), 4 as Vulnerable (VU) and 3 as Near Threatened (NT) according to the IUCN Red List status.

During the survey in Kech District, a total of 44 species of mammals, aves and reptiles were observed, of which 18 species were mammals, 18 species were birds and 8 species were reptiles. All of these mammalian, avian and reptilian species have previously been recorded in the studies conducted in Hingol National Park, the Hub Dam area, Chagai, Nushki, Panjgur, Kharan, Washuk and Zhob districts, as well as in survey of the major ecological zones of Balochistan (21-25). In the mammalian fauna, 7 orders were observed, of which the order Carnivora was dominant with 7 species. A similar result was found in a study conducted in the Takattu and Zarghoon mountain ranges of Quetta District, where the order Carnivora was the most frequent (26), while according to a survey conducted in Barkhan District, the order Rodentia was the most common followed by the order Carnivora (27). In the avian fauna, 10 order were observed, of which the order Passeriformes was dominant with 5 species. A similar observation was recorded during a biodiversity survey conducted in Musakhel District, where Passeriformes was the most abundant avian order (28). In the reptilian fauna, 2 orders were observed, of which the order Squamata was dominant with 7 species. A similar finding was reported in studies conducted in Quetta and Chagai districts, where greater numbers of lizards and snakes were observed (29, 30).

In Kech District, the highest number of chordate families and species was recorded in Dasht Tehsil with 29 families and 37 species. In Buleda Tehsil, the number of chordate families and species were 24 and 28, respectively. In Turbat Tehsil, the number of chordate families and species were 24 and 30, respectively. The lowest numbers were recorded in Tump Tehsil with 17 families and 19 species. Tehsil Tump recorded a lower number of vertebrate species than the other tehsils surveyed in Kech District. Surveys were conducted using comparable effort across all four tehsils. However, access to certain areas within Tump was restricted, which may have reduced species detectability in some areas. Therefore, the lower number of recorded species may reflect both actual variation in vertebrate distribution and limitations in survey coverage. Further investigations encompassing currently inaccessible areas would help clarify the observed pattern in the number of species recorded within the tehsil.

To date, no study has been conducted on the mammalian, avian and reptilian fauna of Kech District. Even in the Balochistan province, only a few studies have been conducted on vertebrate fauna in other districts. Therefore, there is a lack of literature and insufficient data regarding the vertebrate fauna of Balochistan. Consequently, the mammalian, avian and reptilian fauna of Kech District remain poorly understood.

CONCLUSION

Wildlife is an irreplaceable natural asset and a cornerstone of ecological stability, with profound cultural and economic value. To stem the accelerating loss of biodiversity, it is imperative to confront both human–wildlife conflicts and the specific threats facing Balochistan’s vertebrate fauna. Immediate actions — such as curbing illegal hunting and trade, reinforcing protected areas through community engagement, advancing survey and research efforts, preventing habitat degradation, and raising local awareness — are critical. These steps not only aid species recovery but also foster a more harmonious human–nature relationship, upon which global sustainability depends.

This study in Kech District recorded 44 vertebrate species (mammals, birds and reptiles) across its four tehsils, representing 7 mammalian, 10 avian and 2 reptilian orders. Dasht Tehsil exhibited the highest familial and species diversity, while Tump Tehsil showed the lowest. The findings underscore that anthropogenic pressures—including poaching, trapping, habitat loss, climate change, and overhunting pose serious risks to this rich fauna, highlighting the urgency of targeted, locally adapted conservation strategies.

Recommendation:

The authors express their sincere gratitude to the Forest and Wildlife Department, Government of Balochistan for their valuable support and data collection. We are also thankful to the local communities and volunteers of Buleda, Dasht, Turbat and Tump for sharing information regarding wildlife species and their distribution. Their support was invaluable in completing this research successfully.

Conflict of interest:

The authors report no conflicts of interest

Author’s contributions:

GM Conceptualized the study, wrote the manuscript, supervised the study and provided guidance throughout the research; RMT Wrote the manuscript, presented the data and conducted the taxonomic identification of species; NN Collected the data and conducted the taxonomic identification of species; GN & AI Provided academic guidance during the preparation of the manuscript; RK Assisted with statistical analysis and interpretation of results.

Declaration of generative AI-Assisted Tools:

No AI-assisted tools were used by the authors.

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