

Building evidence for conservation globally

Journal of Threatened Taxa



Open Access

10.11609/jott.2024.16.7.25495-25638
www.threatenedtaxa.org

26 July 2024 (Online & Print)
16(7): 25495-25638
ISSN 0974-7907 (Online)
ISSN 0974-7893 (Print)

— Lakshmi Niranjana —



ISSN 0974-7907 (Online); ISSN 0974-7893 (Print)

Publisher
Wildlife Information Liaison Development Society
www.wild.zooreach.org

Host
Zoo Outreach Organization
www.zooreach.org

43/2 Varadarajulu Nagar, 5th Street West, Ganapathy, Coimbatore, Tamil Nadu 641006, India
Registered Office: 3A2 Varadarajulu Nagar, FCI Road, Ganapathy, Coimbatore, Tamil Nadu 641006, India
Ph: +91 9385339863 | www.threatenedtaxa.org
Email: sanjay@threatenedtaxa.org

EDITORS

Founder & Chief Editor

Dr. Sanjay Molur

Wildlife Information Liaison Development (WILD) Society & Zoo Outreach Organization (ZOO),
43/2 Varadarajulu Nagar, 5th Street West, Ganapathy, Coimbatore, Tamil Nadu 641006, India

Deputy Chief Editor

Dr. Neelesh Dahanukar

Noida, Uttar Pradesh, India

Managing Editor

Mr. B. Ravichandran, WILD/ZOO, Coimbatore, Tamil Nadu 641006, India

Associate Editors

Dr. Mandar Paingankar, Government Science College Gadchiroli, Maharashtra 442605, India

Dr. Ulrike Streicher, Wildlife Veterinarian, Eugene, Oregon, USA

Ms. Priyanka Iyer, ZOO/WILD, Coimbatore, Tamil Nadu 641006, India

Dr. B.A. Daniel, ZOO/WILD, Coimbatore, Tamil Nadu 641006, India

Editorial Board

Dr. Russel Mittermeier

Executive Vice Chair, Conservation International, Arlington, Virginia 22202, USA

Prof. Mewa Singh Ph.D., FASc, FNA, FNAsc, FNAPsy

Ramanna Fellow and Life-Long Distinguished Professor, Biopsychology Laboratory, and
Institute of Excellence, University of Mysore, Mysuru, Karnataka 570006, India; Honorary
Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore; and Adjunct
Professor, National Institute of Advanced Studies, Bangalore

Stephen D. Nash

Scientific Illustrator, Conservation International, Dept. of Anatomical Sciences, Health Sciences
Center, T-8, Room 045, Stony Brook University, Stony Brook, NY 11794-8081, USA

Dr. Fred Pluthero

Toronto, Canada

Dr. Priya Davidar

Sigur Nature Trust, Chadapatti, Mavinahalla PO, Nilgiris, Tamil Nadu 643223, India

Dr. Martin Fisher

Senior Associate Professor, Battcock Centre for Experimental Astrophysics, Cavendish
Laboratory, JJ Thomson Avenue, Cambridge CB3 0HE, UK

Dr. John Fellowes

Honorary Assistant Professor, The Kadoorie Institute, 8/F, T.T. Tsui Building, The University of
Hong Kong, Pokfulam Road, Hong Kong

Prof. Dr. Mirco Solé

Universidade Estadual de Santa Cruz, Departamento de Ciências Biológicas, Vice-coordenador
do Programa de Pós-Graduação em Zoologia, Rodovia Ilhéus/Itabuna, Km 16 (45662-000)
Salobrinho, Ilhéus - Bahia - Brasil

Dr. Rajeev Raghavan

Professor of Taxonomy, Kerala University of Fisheries & Ocean Studies, Kochi, Kerala, India

English Editors

Mrs. Mira Bhojwani, Pune, India

Dr. Fred Pluthero, Toronto, Canada

Mr. P. Ilangoan, Chennai, India

Ms. Sindhura Stothra Bhashyam, Hyderabad, India

Web Development

Mrs. Latha G. Ravikumar, ZOO/WILD, Coimbatore, India

Typesetting

Mrs. Radhika, ZOO, Coimbatore, India

Mrs. Geetha, ZOO, Coimbatore India

Fundraising/Communications

Mrs. Payal B. Molur, Coimbatore, India

Subject Editors 2020–2022

Fungi

Dr. B. Shivaraju, Bengaluru, Karnataka, India

Dr. R.K. Verma, Tropical Forest Research Institute, Jabalpur, India

Dr. Vatsavaya S. Raju, Kakatiya University, Warangal, Andhra Pradesh, India

Dr. M. Krishnappa, Jnana Sahyadri, Kuvempu University, Shimoga, Karnataka, India

Dr. K.R. Sridhar, Mangalore University, Mangalagangothri, Mangalore, Karnataka, India

Dr. Gunjan Biswas, Vidyasagar University, Midnapore, West Bengal, India

Dr. Kiran Ramchandra Ranadive, Annasaheb Magar Mahavidyalaya, Maharashtra, India

Plants

Dr. G.P. Sinha, Botanical Survey of India, Allahabad, India

Dr. N.P. Balakrishnan, Ret. Joint Director, BSI, Coimbatore, India

Dr. Shonil Bhagwat, Open University and University of Oxford, UK

Prof. D.J. Bhat, Retd. Professor, Goa University, Goa, India

Dr. Ferdinando Boero, Università del Salento, Lecce, Italy

Dr. Dale R. Calder, Royal Ontario Museum, Toronto, Ontario, Canada

Dr. Cleofas Cervancia, Univ. of Philippines Los Baños College Laguna, Philippines

Dr. F.B. Vincent Florens, University of Mauritius, Mauritius

Dr. Merlin Franco, Curtin University, Malaysia

Dr. V. Irudayaraj, St. Xavier's College, Palayamkottai, Tamil Nadu, India

Dr. B.S. Kholia, Botanical Survey of India, Gangtok, Sikkim, India

Dr. Pankaj Kumar, Department of Plant and Soil Science, Texas Tech University, Lubbock, Texas, USA.

Dr. V. Sampath Kumar, Botanical Survey of India, Howrah, West Bengal, India

Dr. A.J. Solomon Raju, Andhra University, Visakhapatnam, India

Dr. Vijayasankar Raman, University of Mississippi, USA

Dr. B. Ravi Prasad Rao, Sri Krishnadevaraya University, Anantpur, India

Dr. K. Ravikumar, FRLHT, Bengaluru, Karnataka, India

Dr. Aparna Watve, Pune, Maharashtra, India

Dr. Qiang Liu, Xishuangbanna Tropical Botanical Garden, Yunnan, China

Dr. Noor Azhar Mohamed Shazili, Universiti Malaysia Terengganu, Kuala Terengganu, Malaysia

Dr. M.K. Vasudeva Rao, Shiv Ranjani Housing Society, Pune, Maharashtra, India

Prof. A.J. Solomon Raju, Andhra University, Visakhapatnam, India

Dr. Mandar Datar, Agharkar Research Institute, Pune, Maharashtra, India

Dr. M.K. Janarthanam, Goa University, Goa, India

Dr. K. Karthikeyan, Botanical Survey of India, India

Dr. Errol Vela, University of Montpellier, Montpellier, France

Dr. P. Lakshminarasimhan, Botanical Survey of India, Howrah, India

Dr. Larry R. Noblick, Montgomery Botanical Center, Miami, USA

Dr. K. Haridasan, Pallavur, Palakkad District, Kerala, India

Dr. Analinda Manila-Fajard, University of the Philippines Los Banos, Laguna, Philippines

Dr. P.A. Sinu, Central University of Kerala, Kasaragod, Kerala, India

Dr. Afroz Alam, Banasthali Vidyapith (accredited A grade by NAAC), Rajasthan, India

Dr. K.P. Rajesh, Zamorin's Guruvayurappan College, GA College PO, Kozhikode, Kerala, India

Dr. David E. Boufford, Harvard University Herbaria, Cambridge, MA 02138-2020, USA

Dr. Ritesh Kumar Choudhary, Agharkar Research Institute, Pune, Maharashtra, India

Dr. A.G. Pandurangan, Thiruvananthapuram, Kerala, India

Dr. Navendu Page, Wildlife Institute of India, Chandrabani, Dehradun, Uttarakhand, India

Dr. Kannan C.S. Warriar, Institute of Forest Genetics and Tree Breeding, Tamil Nadu, India

Invertebrates

Dr. R.K. Avasthi, Rohtak University, Haryana, India

Dr. D.B. Bastawade, Maharashtra, India

Dr. Partha Pratim Bhattacharjee, Tripura University, Suryamaninagar, India

Dr. Kailash Chandra, Zoological Survey of India, Jabalpur, Madhya Pradesh, India

Dr. Ansie Dippenaar-Schoeman, University of Pretoria, Queenswood, South Africa

Dr. Rory Dow, National Museum of Natural History Naturalis, The Netherlands

Dr. Brian Fisher, California Academy of Sciences, USA

Dr. Richard Gallon, Llandudno, North Wales, LL30 1UP

Dr. Hemant V. Ghate, Modern College, Pune, India

Dr. M. Monwar Hossain, Jahangirnagar University, Dhaka, Bangladesh

For Focus, Scope, Aims, and Policies, visit https://threatenedtaxa.org/index.php/JoTT/aims_scope
For Article Submission Guidelines, visit <https://threatenedtaxa.org/index.php/JoTT/about/submissions>
For Policies against Scientific Misconduct, visit https://threatenedtaxa.org/index.php/JoTT/policies_various

continued on the back inside cover

Cover: Mixed media illustration of a Blue bird and Sunbird. © Lakshmi Niranjana.



Small Wild Cats Special Series

Rare encounters: Jungle Cat *Felis chaus* Schreber, 1777 (Mammalia: Carnivora: Felidae) in the lower reaches of the Jordan River, Jordan

Ehab Eid¹ & Mohammad Farid Alayyan²

¹ Lutfi Queder Street, Al-Yadodah 11610, Amman, Jordan.

² Ghzaleh Street, Khelda Um Alsummaq, Amman, Jordan.

¹eha_jo@yahoo.com (corresponding author), ²blueberrytradingest@gmail.com

Abstract: The Jungle Cat *Felis chaus* is classified as critically endangered in Jordan due to its limited distribution and presumed population decline. We present new evidence for its presence in the lower Jordan River region, where it was recorded opportunistically during a monitoring program focused on the Golden Jackal *Canis aureus*. Five photographs of the Jungle Cat were obtained between June 2020 and February 2022, primarily during night-time and early morning hours. In view of these findings, we recommend urgent implementation of conservation measures, including other effective area-based conservation measures, particularly in military-controlled zones with limited accessibility where confirmed sightings occurred.

Keywords: Bycatch, camera trap, citizen science, habitats suitability, human-induced threats, northern ghor, other effective conservation measures, private farms, riverbed, threatened species.

تم تصنيف قط الغابات في الأردن كنوع مهدد بالانقراض بشكل حرج نظراً لتوزيعه الجغرافي المحدود والانخفاض المحتمل في أعداد جموعه. تقدم في هذا البحث أدلة جديدة تثبت وجود هذا النوع في المناطق السفلية من نهر الأردن، حيث تم تصويره بشكل انتهازى خلال برنامج مراقبة لحيوانات ابن أوى. تم التقاط خمس صور لقط الغابات في ساعات الليل والصباح الباكر في الفترة الواقعة ما بين شهر حزيران للعام 2020 وشهر شباط من العام 2022. في ضوء هذه النتائج، نوصي بتطبيق تدابير عاجلة أخرى لحماية المناطق بفعالية، لا سيما تلك المناطق التي تخضع لإدارة القوات المسلحة الأردنية والتي توفر ملاذات للأنواع لمحدودية إمكانية الوصول إليها.

Editor: Angie Appel, Wild Cat Network, Germany.

Date of publication: 26 July 2024 (online & print)

Citation: Eid, E. & M.F. Alayyan (2024). Rare encounters: Jungle Cat *Felis chaus* Schreber, 1777 (Mammalia: Carnivora: Felidae) in the lower reaches of the Jordan River, Jordan. *Journal of Threatened Taxa* 16(7): 25571–25576. <https://doi.org/10.11609/jott.9122.16.7.25571-25576>

Copyright: © Eid & Alayyan 2024. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use, reproduction, and distribution of this article in any medium by providing adequate credit to the author(s) and the source of publication.

Funding: This project is self-funded by the authors.

Competing interests: The authors declare no competing interests.

Author details: MR. EHAB EID is a steering committee member in the IUCN SSC, vice chair for West Asia, and an editorial board member at IUCN, with over 22-years of experience in terrestrial and marine biodiversity conservation and protected areas management in the Middle East. MR. MOHAMMAD FARID ALAYYAN has worked with INGOs such as OXFAM and managed a family agriculture venture focused on citrus. His experience in this private enterprise at a migration stopover site has enriched his knowledge of species and conservation efforts.

Author contributions: E.E and M.F.A participated in research design and data collection. E.E. analyzed data and wrote the manuscript. E.E and M.F.A reviewed the article and gave final approval for publication.

Acknowledgements: We extend our gratitude to all farmers for their support and cooperation during the survey. We also appreciate the valuable suggestions and comments from the reviewers and Angie Appel, which significantly enhanced the content of the manuscript.

INTRODUCTION

Consensus across various red list assessments indicates a decline in the Jungle Cat *Felis chaus* population at national, regional, and global levels, in addition to the paucity of available information. It has been assessed as Least Concern on the IUCN Red List, and the global population is thought to be declining (Gray et al. 2016). However, regional assessments in West Asia vary. It is classified as Data Deficient in the Mediterranean Region and the Arabian Peninsula (Temple & Cuttelod 2009; Jdeidi et al. 2010; Mallon et al. 2023), but Critically Endangered in Jordan due to limited occupancy and presumed population decline (Eid et al. 2020).

The Jungle Cat is distributed across a wide range, from the Anatolian region in Turkey (Gerngross 2014; Ünal & Eryilmaz 2020) southward to the Nile River valley in Egypt (Basuony 2000). In the Levant, it occurs in southern Lebanon, Palestine and western Jordan (Qumsiyeh 1996; Amr 2000; Tohme & Tohme 2000). To the east of the Levant, its range extends to the Euphrates and Tigris Rivers in Syria and Iraq (Masetti 2009; Al-Zubaidi et al. 2017; Mallon et al. 2023), the Iranian Plateau and the Caucasus (Sanei et al. 2016; Askerov et al. 2022) to central, southern, and southeastern Asia (Gray et al. 2016).

The Jungle Cat is considered rare in Jordan, with a limited distribution mainly confined to the country's northwestern region (Eid et al. 2020). Information about it is scarce, possibly due to restricted access to the Jordan River, designated as a military zone with limited access for people (Abu Baker et al. 2003). The only known records are two deceased specimens found on 10 February 1998 in Al-Baqurah within the Yarmouk River Valley (Abu Baker et al. 2003; Eid et al. 2020). Since then, there have been no further records on its status or potential distribution in Jordan. Abu Baker et al. (2003) suggested that its range might extend to the lower regions of the Jordan River and its main tributaries.

Here we report photographic evidence of the continued presence of the Jungle Cat in Jordan obtained during a monitoring survey targeting the Golden Jackal *Canis aureus* in northwestern Jordan.

Study area

Our survey was conducted in the lower reaches of the Jordan River between the Sea of Galilee and the Dead Sea in Jordan (Ibrahim et al. 1976; Katz 2022). The study area encompassed a 9.9 ha private farm in Sheikh Hussein, northern Ghor (Figure 1), cultivating citrus varieties using irrigation, fertilization, and

herbicide control. The farm boundaries extend to the Jordan River, and the farm's landscape features riparian vegetation dominated by Common Reed *Phragmites communis*, Cattail *Typha domingensis*, and Athel Tree *Tamarix aphylla*. Additionally, various shrubs and herbs thrive, including Sieber's Wormwood *Artemisia sieberi*, Christ's Thorn Jujube *Ziziphus spina-christi*, Arabian Fagonia *Fagonia arabica*, and Common Mallow *Malva sylvestris*. The farm serves as a sanctuary for migratory birds such as ducks, herons, egrets and storks. Despite this, the dense reed may pose a fire hazard, prompting farmers to actively manage it through removal, controlled burning or herbicide application to maintain a sustainable farming environment.

MATERIALS AND METHODS

We deployed four Dark Ops HD MAX Browning camera traps that were set to a trigger speed of 0.6 seconds with a trigger delay of one second. The cameras were active for 24 hours at the same locations during the entire study period and were checked monthly. They were fastened to iron sticks anchored in the riverbed and positioned approximately 40–50 cm above ground in both south and north directions to avoid false records during sunrise and sunset. No bait was used to ensure neutral data collection. Their locations were determined using a Garmin eTrex 20x device set to datum WGS84.

RESULTS

Our total survey effort covered 2,548 camera trap days at four locations from 1 June 2020 to 28 February 2022. We obtained five photographs of solitary Jungle Cats at all four camera trap locations. Four records occurred during late-night or early-morning hours and one in the afternoon. In 2021, the Jungle Cat was photographed on 12 January at 1258 h, 17 January at 2133 h, 11 April at 2135 h, and 3 September at 2241 h. The only record in 2022 occurred on 30 January at 0212 h (Image 1).

During the survey, several other species were recorded, including the Golden Jackal *Canis aureus*, Egyptian Mongoose *Herpestes ichneumon*, Wild Boar *Sus scrofa*, Red Fox *Vulpes vulpes*, various rodent and numerous bird species.

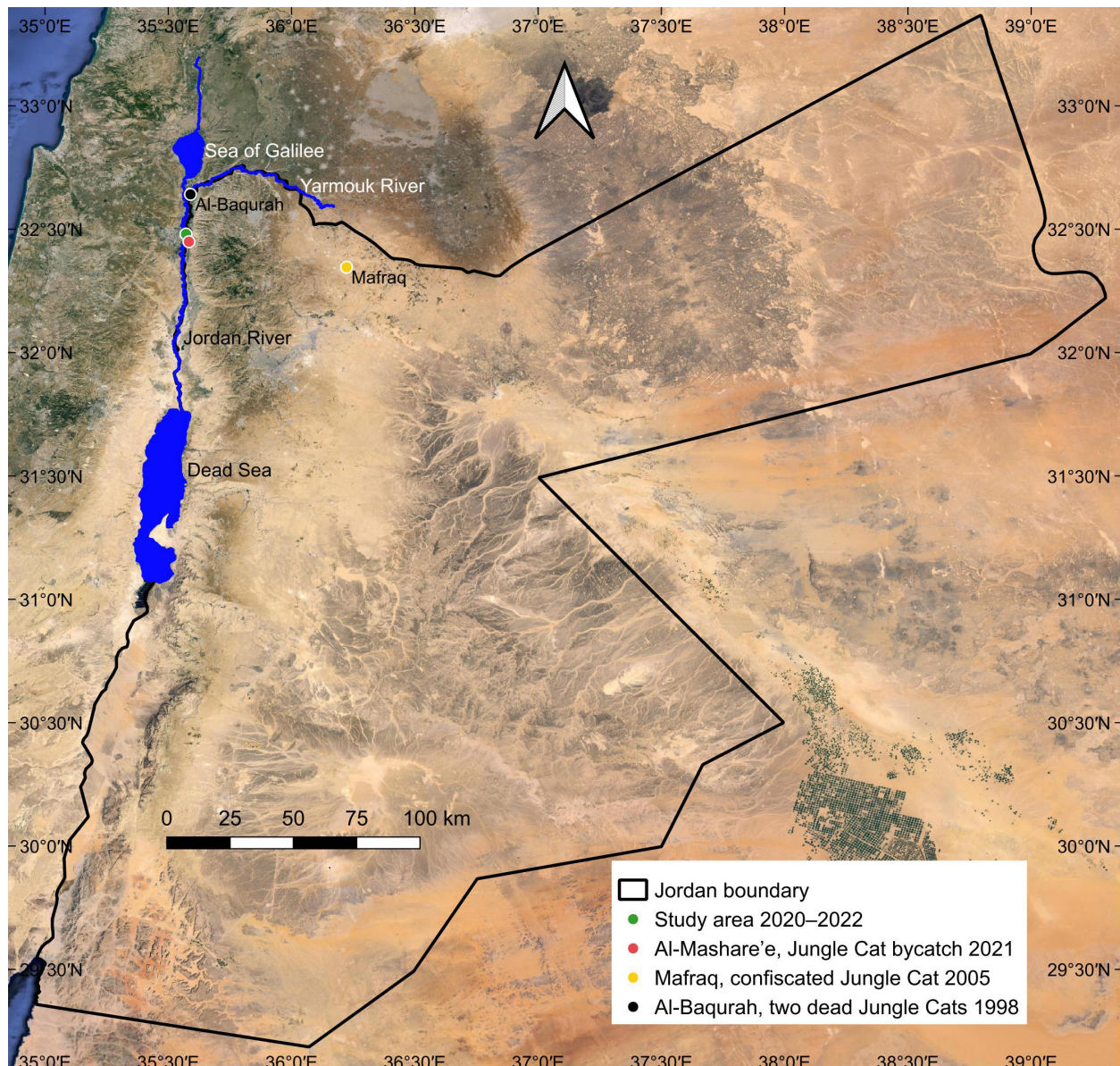


Figure 1. Map showing study area and locations where Jungle Cats were encountered between February 1998 and January 2022 in Jordan.

DISCUSSION

Our survey is the first camera-trapping study in the Jordan River basin. Our results confirm the continued presence of the Jungle Cat in the lower reaches of the Jordan River nearly 22 years after two dead specimens were found near the Yarmouk River, a tributary of the Jordan River (Abu Baker et al. 2003). However, the limited number of photographs did not allow to determine the number of individuals in our study area.

We consider the agricultural setting of our study area and its surroundings to represent a suitable habitat for the Jungle Cat. Thick and dense riparian vegetation along riverbeds has been suggested to provide ideal

hiding and movement spaces (Abu Baker et al. 2003; Masseti 2009; Sanei et al. 2016; Eid et al. 2020; Mishra et al. 2020; Desai et al. 2022). As documented by our survey, the area also hosts abundant rodents, which constitute the most important prey items of the Jungle Cat (Mukherjee et al. 2004; Majumder et al. 2011; Rostro-García et al. 2021).

The camera traps frequently documented four feral dogs *Canis familiaris* on the farm, which the owner kept after rescuing them. Despite more than 18 months of study duration, the Jungle Cat was recorded rather infrequently. The low detection rate can be attributed to the dense growth of reed plants, which significantly hindered visibility, affected the quality of photographs



Image 1. Jungle Cats photographed in the study area between 12 January 2021 and 30 January 2022. © Ehab Eid.

and resulted in numerous photographs of plants swaying in the wind. This situation required considerable effort to repeatedly remove reed growth. Active agricultural operations of workers, roaming feral dogs, Golden Jackals and other wildlife using the same habitat day and night added complexity to the recording environment. However, this challenging setting might also benefit the Jungle Cats, allowing them to manoeuvre quietly through dense vegetation (Abu Baker et al. 2003) and

avoid encounters with humans, feral dogs and other competitors. The low detection rate of the Jungle Cat can also be attributed to the exceedingly small population within our study area and its surroundings.

We identified several human-induced threats to the Jungle Cat population, consistent with findings by other scholars (Abu Baker et al. 2003; Eid et al. 2020, 2022). These threats include habitat alteration, fragmentation and degradation due to agricultural expansion,

the burning of wetland reeds, prey depletion from widespread pesticide use, and bycatch. An incident of bycatch involved the capture of an adult Jungle Cat in November 2021 in the Al-Mashare'e area, approximately 6 km south of our study area. The cat was caught in a net intended for chicken protection but escaped after being video-recorded. Further investigations using citizen science may reveal more instances of accidental or incidental hunting of the Jungle Cat, potentially challenging literature that suggests no hunting of this species occurs in Jordan (Abu Baker et al. 2003; Eid & Handal 2018). Elsewhere in its range, the Jungle Cat is threatened by the conversion of natural wetlands to agricultural lands, excessive destruction and burning of reeds, pollution due to extensive pesticide use, and poaching (Ogurlu et al. 2010; Gray et al. 2016; Sanei et al. 2016; Barkat et al. 2021).

Furthermore, the restricted niche where wild and domestic species coexist exacerbates the threat to the Jungle Cat. This was confirmed through species distribution models assessing suitable habitats for the Jungle Cat in Jordan, which revealed a significant decline in these habitats. Projections indicate a 33% reduction by 2050 and a staggering loss of 90% by 2070 under the Representative Concentration Pathways (RCP) 2.6 scenario. Even under the RCP 8.5 scenario, an 84% habitat loss is forecasted by 2070 (Eid et al. 2022). These alarming trends emphasize the need for conservation efforts to protect the Jungle Cat from extinction. It was not documented in Jordan's trade or folk medicine (Eid et al. 2011; Aloufi & Eid 2016). A single individual, claimed to be brought from Syria, was confiscated at a private farm in Mafrqa city in eastern Jordan in 2005 (Ehab Eid, unpublished data).

The designation of Yarmouk protected area in 2010 in the Yarmouk River valley and the military control of border areas may be beneficial for the conservation of the Jungle Cat, in view of historical records of dead specimens in this area (Abu Baker et al. 2003). No sightings have been recorded within the protected area to date (Sufian Al-Yahya, pers. comm. 3 February 2024). This absence of sightings may be due to restricted site access or limited survey efforts. Therefore, targeted research and collaboration with the military are essential to determine the Jungle Cat's status.

Despite the Jungle Cat being listed in Appendix I of the Wildlife Protection of the Agricultural Law Number 13 of 2015, based on Regulation Number 43 of 2008, enforcing these legal instruments in Jordan is ineffective. Mitigating threats and preventing species extinction requires a thorough review and development of the legal

framework associated with effective implementation.

The Jungle Cat's presence within this limited access protected zone underscores the critical need for targeted conservation measures. The Jordanian government, particularly the Ministry of Environment and conservation organizations such as the Royal Society for the Conservation of Nature, should explore establishing Other Effective Area-Based Conservation Measures (OECMs). Farhadinia et al. (2022) recommended this approach to meet post-2020 biodiversity targets in Asia, noting that achieving the ambitious 2030 goal requires a substantial increase in protected area coverage. Currently, the riverbeds of the Yarmouk and Jordan Rivers are under army protection, presenting a valuable opportunity for species and habitat conservation and implementing OECMs, especially in view of the area's limited accessibility. Specifically, implementing OECMs through strategic partnerships with military units along the Yarmouk and Jordan rivers is essential to safeguard the Jungle Cat population and prevent its potential extinction in Jordan.

The results of this study are highly significant as they pave the way for further research into the status of the Jungle Cat across the entire Jordan River basin and its tributaries, extending northward to include the Yarmouk River. Establishing effective communication and collaboration with military units will facilitate and support the implementation of surveys. Regional cooperation with the West Bank in Palestine and southeastern Syria adjacent to the Yarmouk River valley is crucial, as it will likely yield important insights into the Jungle Cat's status and habitat use. Understanding the regional context will aid conservation efforts, particularly during species Red Listing and considering the rescue effect. These findings highlight the need for a coordinated approach to wildlife management and conservation, enhancing our understanding and enabling more effective protection measures for the Jungle Cat.

REFERENCES

- Abu Baker, M., K. Nassar, L. Rifai, M. Qarqaz, W. Al-Melhim & Z. Amr (2003). On the current status and distribution of the Jungle Cat *Felis chaus*, in Jordan (Mammalia: Carnivora). *Zoology in the Middle East* 30: 5–10. <https://doi.org/10.1080/09397140.2003.10637982>
- Aloufi, A. & E. Eid (2016). Zootherapy: A study from the Northwestern region of the Kingdom of Saudi Arabia and the Hashemite Kingdom of Jordan. *Indian Journal of Traditional Knowledge* 15(4): 561–569.
- Al-Zubaidi, A.A., M.K. Mohammad & M.J. Rasheed (2017). The importance of geodiversity on the animal diversity in Huwaiza marsh and the adjacent areas, southeastern Iraq. *Bulletin of the Iraq Natural History Museum* 14(3): 235–249. <https://doi.org/10.26842/binhm.7.2017.14.3.0235>

- Amr, Z.S. (2000). *Jordan Country Study on Biological Diversity: Mammals of Jordan*. United Nations Environment Programme (UNEP), Amman, 100 pp.
- Askerov, E., S.A. Trepet, T.G. Eskina, K.V. Bibina, A.I. Narkevich, A.B. Pkhitikov, N. Zazanashvili & K. Akhmadova (2022). Estimation of the population densities of species prey or competitor to the Leopard (*Panthera pardus*) in Hyrcan National Park, Azerbaijan. *Biology Bulletin* 49(7): 953–960. <https://doi.org/10.1134/S1062359022070020>
- Barkat, A.I., F.T. Liza, S. Akter, A.R. Shome & M.F. Rabbe (2021). Wildlife hunting practices of the Santal and Oraon communities in Rajshahi, Bangladesh. *Journal of Threatened Taxa* 13(11): 19484–19491. <https://doi.org/10.11609/jott.7260.13.11.19484-19491>
- Basuony, M.I. (2000). *Ecological Survey of Burullus Nature Protectorate: Mammals*. Nature Conservation Sector, Egyptian Environmental Affairs Agency, Cairo, Egypt, 32 pp.
- Desai, S., C. Gosai & N. Dharaiya (2022). Notes on Jungle Cat nesting site in agricultural areas and associated threats. *Cat News* 76: 34.
- Eid, E. & R. Handal (2018). Illegal hunting in Jordan: Using social media to assess impacts on wildlife. *Oryx* 52(4): 730–735. <https://doi.org/10.1017/S0030605316001629>
- Eid, E., A. Soultan & H. Elalqamy (2022). Habitat suitability modelling for feline species in Jordan: A tool for climate-responsive conservation planning. *Journal of Wildlife and Biodiversity* 6(3): 26–53. <https://doi.org/10.22120/jwb.2022.290322.1452>
- Eid, E., I. Al Hasani, T. Al Share, O. Abed & Z. Amr (2011). Animal Trade in Amman Local Market, Jordan. *Jordan Journal of Biological Science* 4(2): 101–108.
- Eid, E., M. Abu Baker & Z. Amr (2020). *National Red Data Book of Mammals in Jordan*. Amman, Jordan: IUCN Regional Office for West Asia, Amman, vi + 122 pp. <https://doi.org/10.2305/IUCN.CH.2020.12.en>
- Farhadinia, M.S., A. Waldron, Ž. Kaszta, E. Eid, A. Hughes, H. Ambarlı, H. Al-Hikmani, B. Buuveibaatar, M.A. Gritsina, I. Haidir & Z.U. Islam (2022). Current trends suggest most Asian countries are unlikely to meet future biodiversity targets on protected areas. *Communication Biology* 5: 1221. <https://doi.org/10.1038/s42003-022-04061-w>
- Gerngross, P. (2014). Recent records of Jungle Cat in Turkey. *Cat News* 61: 10–11.
- Gray, T.N.E., R. Timmins, D. Jathana, J.W. Duckworth, H. Baral & S. Mukherjee (2016). *Felis chaus*. The IUCN Red List of Threatened Species: e.T8540A50651463. Downloaded on 15 February 2024. <https://doi.org/10.2305/IUCN.UK.2016-2.RLTS.T8540A50651463.en>
- Ibrahim, M., A. Sauer & K. Yassine (1976). The East Jordan Valley Survey, 1975. *Bulletin of the American Schools of Oriental Research* 222(1): 41–66.
- Jdeidi, T., M. Masseti, I. Nader, K. de Smet & F. Cuzin (2010). *Felis chaus* (Mediterranean assessment). The IUCN Red List of Threatened Species 2010: e.T8540A12915840. Downloaded on 28 April 2024. <https://www.iucnredlist.org/species/8540/12915840>
- Katz, D. (2022). Basin management under conditions of scarcity: The transformation of the Jordan River basin from regional water supplier to regional water importer. *Water* 14(10): 1605. <https://doi.org/10.3390/w14101605>
- Majumder, A., K. Sankar, Q. Qureshi & S. Basu (2011). Food habits and temporal activity patterns of the Golden Jackal *Canis aureus* and the Jungle Cat *Felis chaus* in Pench Tiger Reserve, Madhya Pradesh, India. *Journal of Threatened Taxa* 3(11): 2221–2225. <https://doi.org/10.11609/JoTT.o2713.2221-5>
- Mallon, D.P., C. Hilton-Taylor, G. Amori, R. Baldwin, P.L. Bradshaw & K. Budd (2023). *The Conservation Status and Distribution of the Mammals of the Arabian Peninsula*. IUCN, Gland, Switzerland, and Environment and Protected Areas Authority, Sharjah, United Arab Emirates, 164 pp. <https://doi.org/10.2305/WBGQ3886>
- Masseti, M. (2009). Carnivores of Syria. In: Neubert, E., Z. Amr, S. Taiti & B. Gümüs (eds.) *Animal Biodiversity in the Middle East*. Proceedings of the First Middle Eastern Biodiversity Congress, Aqaba, Jordan, 20–23 October 2008. *ZooKeys* 31: 229–252. <https://doi.org/10.3897/zookeys.31.170>
- Mishra, R., B. Gautam, S.K. Shah, N. Subedi, C.P. Pokheral & B.R. Lamichhane (2020). Opportunistic records of Jungle Cat (*Felis chaus*) and their activity pattern in Koshi Tappu Wildlife Reserve, Nepal. *Nepalese Journal of Zoology* 4(1): 50–55. <https://doi.org/10.3126/njz.v4i1.30673>
- Mukherjee, S., S.P. Goyal, A.J.T. Johnsingh & M.L. Pitman (2004). The importance of rodents in the diet of Jungle Cat (*Felis chaus*), Caracal (*Caracal caracal*) and Golden Jackal (*Canis aureus*) in Sariska Tiger Reserve, Rajasthan, India. *Journal of Zoology* 262(4): 405–411. <https://doi.org/10.1017/S0952836903004783>
- Ogurlu I., E. Gundogdu & I.C. Yildirim (2010). Population status of Junge Cat (*Felis chaus*) in Egirdir Lake, Turkey. *Journal of Environmental Biology* 31: 179–183.
- Qumsiyeh, M.B. (1996). *Mammals of the Holy Land*. Texas Tech University Press, Lubbock, 389 pp.
- Rostro-García, S., J.F. Kamler, C. Minge, A. Caragiulo, R. Crouthers, M. Groenenberg, T.N. Gray, V. In, C. Pin, P. Savanna & M. Kéry (2021). Small cats in big trouble? Diet, activity, and habitat use of Jungle Cats and Leopard Cats in threatened dry deciduous forests, Cambodia. *Ecology and Evolution* 11(9): 4205–4217. <https://doi.org/10.1002/ece3.7316>
- Sanei, A., M. Mousavi., K. Rabie., M.S. Khosravi., L. Julaei., F. Gudarzi., B. Jaafari & M. Chalani. (2016). Distribution, characteristics and conservation of the Jungle Cat in Iran. *CAT News Special Issue* 8: 51–55.
- Temple, H.J. & A. Cuttelod (Compilers) (2009). *The Status and Distribution of Mediterranean Mammals*. IUCN, Gland, Switzerland and Cambridge, UK, 32pp. <https://doi.org/10.2305/IUCN.CH.2009.19.en>
- Tohme, G. & H. Tohme (2000). Quelques nouvelles données sur le statut actuel des Felidae au Liban et plus particulièrement du Chat des Marais *Felis chaus* Gldenstdt, 1776. *Mammalia* 64(2): 247–249.
- nal, Y. & A. Eryilmaz (2020). Jungle Cat (*Felis chaus* Schreber, 1777) population density estimates, activity pattern and spatiotemporal interactions with humans and other wildlife species in Turkey. *Applied Ecology & Environmental Research* 18(4): 5873–5890. https://doi.org/10.15666/aeer/1804_58735890

Mr. Jatishwor Singh Irungbam, Biology Centre CAS, Branišovská, Czech Republic.
Dr. Ian J. Kitching, Natural History Museum, Cromwell Road, UK
Dr. George Mathew, Kerala Forest Research Institute, Peechi, India
Dr. John Noyes, Natural History Museum, London, UK
Dr. Albert G. Orr, Griffith University, Nathan, Australia
Dr. Sameer Padhye, Katholieke Universiteit Leuven, Belgium
Dr. Nancy van der Poorten, Toronto, Canada
Dr. Kareen Schnabel, NIWA, Wellington, New Zealand
Dr. R.M. Sharma, (Retd.) Scientist, Zoological Survey of India, Pune, India
Dr. Manju Siliwal, WILD, Coimbatore, Tamil Nadu, India
Dr. G.P. Sinha, Botanical Survey of India, Allahabad, India
Dr. K.A. Subramanian, Zoological Survey of India, New Alipore, Kolkata, India
Dr. P.M. Sureshan, Zoological Survey of India, Kozhikode, Kerala, India
Dr. R. Varatharajan, Manipur University, Imphal, Manipur, India
Dr. Eduard Vives, Museu de Ciències Naturals de Barcelona, Terrassa, Spain
Dr. James Young, Hong Kong Lepidopterists' Society, Hong Kong
Dr. R. Sundararaj, Institute of Wood Science & Technology, Bengaluru, India
Dr. M. Nithyanandan, Environmental Department, La Ala Al Kuwait Real Estate. Co. K.S.C., Kuwait
Dr. Himender Bharti, Punjabi University, Punjab, India
Mr. Purnendu Roy, London, UK
Dr. Saito Motoki, The Butterfly Society of Japan, Tokyo, Japan
Dr. Sanjay Sondhi, TITLI TRUST, Kalpavriksh, Dehradun, India
Dr. Nguyen Thi Phuong Lien, Vietnam Academy of Science and Technology, Hanoi, Vietnam
Dr. Nitin Kulkarni, Tropical Research Institute, Jabalpur, India
Dr. Robin Wen Jiang Ngiam, National Parks Board, Singapore
Dr. Lionel Monod, Natural History Museum of Geneva, Genève, Switzerland.
Dr. Asheesh Shivam, Nehru Gram Bharti University, Allahabad, India
Dr. Rosana Moreira da Rocha, Universidade Federal do Paraná, Curitiba, Brasil
Dr. Kurt R. Arnold, North Dakota State University, Saxony, Germany
Dr. James M. Carpenter, American Museum of Natural History, New York, USA
Dr. David M. Claborn, Missouri State University, Springfield, USA
Dr. Kareen Schnabel, Marine Biologist, Wellington, New Zealand
Dr. Amazonas Chagas Júnior, Universidade Federal de Mato Grosso, Cuiabá, Brasil
Mr. Monsoon Jyoti Gogoi, Assam University, Silchar, Assam, India
Dr. Heo Chong Chin, Universiti Teknologi MARA (UiTM), Selangor, Malaysia
Dr. R.J. Shiel, University of Adelaide, SA 5005, Australia
Dr. Siddharth Kulkarni, The George Washington University, Washington, USA
Dr. Priyadarsanan Dharma Rajan, ATREE, Bengaluru, India
Dr. Phil Alderslade, CSIRO Marine And Atmospheric Research, Hobart, Australia
Dr. John E.N. Veron, Coral Reef Research, Townsville, Australia
Dr. Daniel Whitmore, State Museum of Natural History Stuttgart, Rosenstein, Germany.
Dr. Yu-Feng Hsu, National Taiwan Normal University, Taipei City, Taiwan
Dr. Keith V. Wolfe, Antioch, California, USA
Dr. Siddharth Kulkarni, The Hormiga Lab, The George Washington University, Washington, D.C., USA
Dr. Tomas Ditrich, Faculty of Education, University of South Bohemia in Ceske Budejovice, Czech Republic
Dr. Mihaly Foldvari, Natural History Museum, University of Oslo, Norway
Dr. V.P. Uniyal, Wildlife Institute of India, Dehradun, Uttarakhand 248001, India
Dr. John T.D. Caleb, Zoological Survey of India, Kolkata, West Bengal, India
Dr. Priyadarsanan Dharma Rajan, Ashoka Trust for Research in Ecology and the Environment (ATREE), Royal Enclave, Bangalore, Karnataka, India

Fishes

Dr. Neelesh Dahanukar, IISER, Pune, Maharashtra, India
Dr. Topiltzin Contreras MacBeath, Universidad Autónoma del estado de Morelos, México
Dr. Heok Hee Ng, National University of Singapore, Science Drive, Singapore
Dr. Rajeev Raghavan, St. Albert's College, Kochi, Kerala, India
Dr. Robert D. Sluka, Chiltern Gateway Project, A Rocha UK, Southall, Middlesex, UK
Dr. E. Vivekanandan, Central Marine Fisheries Research Institute, Chennai, India
Dr. Davor Zanella, University of Zagreb, Zagreb, Croatia
Dr. A. Biju Kumar, University of Kerala, Thiruvananthapuram, Kerala, India
Dr. Akhilesh K.V., ICAR-Central Marine Fisheries Research Institute, Mumbai Research Centre, Mumbai, Maharashtra, India
Dr. J.A. Johnson, Wildlife Institute of India, Dehradun, Uttarakhand, India
Dr. R. Ravinesh, Gujarat Institute of Desert Ecology, Gujarat, India

Amphibians

Dr. Sushil K. Dutta, Indian Institute of Science, Bengaluru, Karnataka, India
Dr. Annemarie Ohler, Muséum national d'Histoire naturelle, Paris, France

Reptiles

Dr. Gernot Vogel, Heidelberg, Germany
Dr. Raju Vyas, Vadodara, Gujarat, India
Dr. Pritpal S. Soorae, Environment Agency, Abu Dubai, UAE.
Prof. Dr. Wayne J. Fuller, Near East University, Mersin, Turkey
Prof. Chandrashekhar U. Rivonker, Goa University, Taleigao Plateau, Goa. India
Dr. S.R. Ganesh, Chennai Snake Park, Chennai, Tamil Nadu, India
Dr. Himansu Sekhar Das, Terrestrial & Marine Biodiversity, Abu Dhabi, UAE

Birds

Dr. Hem Sagar Baral, Charles Sturt University, NSW Australia
Mr. H. Byju, Coimbatore, Tamil Nadu, India
Dr. Chris Bowden, Royal Society for the Protection of Birds, Sandy, UK
Dr. Priya Davidar, Pondicherry University, Kalapet, Puducherry, India
Dr. J.W. Duckworth, IUCN SSC, Bath, UK
Dr. Rajah Jayapal, SACON, Coimbatore, Tamil Nadu, India
Dr. Rajiv S. Kalsi, M.L.N. College, Yamuna Nagar, Haryana, India
Dr. V. Santharam, Rishi Valley Education Centre, Chittoor Dt., Andhra Pradesh, India
Dr. S. Balachandran, Bombay Natural History Society, Mumbai, India
Mr. J. Praveen, Bengaluru, India
Dr. C. Srinivasulu, Osmania University, Hyderabad, India
Dr. K.S. Gopi Sundar, International Crane Foundation, Baraboo, USA
Dr. Gombobaatar Sunde, Professor of Ornithology, Ulaanbaatar, Mongolia
Prof. Reuven Yosef, International Birding & Research Centre, Eilat, Israel
Dr. Taej Mundkur, Wetlands International, Wageningen, The Netherlands
Dr. Carol Inskipp, Bishop Auckland Co., Durham, UK
Dr. Tim Inskipp, Bishop Auckland Co., Durham, UK
Dr. V. Gokula, National College, Tiruchirappalli, Tamil Nadu, India
Dr. Arkady Lelej, Russian Academy of Sciences, Vladivostok, Russia
Dr. Simon Dowell, Science Director, Chester Zoo, UK
Dr. Mário Gabriel Santiago dos Santos, Universidade de Trás-os-Montes e Alto Douro, Quinta de Prados, Vila Real, Portugal
Dr. Grant Connette, Smithsonian Institution, Royal, VA, USA
Dr. P.A. Azeez, Coimbatore, Tamil Nadu, India

Mammals

Dr. Giovanni Amori, CNR - Institute of Ecosystem Studies, Rome, Italy
Dr. Anwaruddin Chowdhury, Guwahati, India
Dr. David Mallon, Zoological Society of London, UK
Dr. Shomita Mukherjee, SACON, Coimbatore, Tamil Nadu, India
Dr. Angie Appel, Wild Cat Network, Germany
Dr. P.O. Nameer, Kerala Agricultural University, Thrissur, Kerala, India
Dr. Ian Redmond, UNEP Convention on Migratory Species, Lansdown, UK
Dr. Heidi S. Riddle, Riddle's Elephant and Wildlife Sanctuary, Arkansas, USA
Dr. Karin Schwartz, George Mason University, Fairfax, Virginia.
Dr. Lala A.K. Singh, Bhubaneswar, Orissa, India
Dr. Mewa Singh, Mysore University, Mysore, India
Dr. Paul Racey, University of Exeter, Devon, UK
Dr. Honnavalli N. Kumara, SACON, Anaikatty P.O., Coimbatore, Tamil Nadu, India
Dr. Nishith Dharaia, HNG University, Patan, Gujarat, India
Dr. Spartaco Gippoliti, Socio Onorario Società Italiana per la Storia della Fauna "Giuseppe Altobello", Rome, Italy
Dr. Justus Joshua, Green Future Foundation, Tiruchirappalli, Tamil Nadu, India
Dr. H. Raghuram, The American College, Madurai, Tamil Nadu, India
Dr. Paul Bates, Harison Institute, Kent, UK
Dr. Jim Sanderson, Small Wild Cat Conservation Foundation, Hartford, USA
Dr. Dan Challender, University of Kent, Canterbury, UK
Dr. David Mallon, Manchester Metropolitan University, Derbyshire, UK
Dr. Brian L. Cypher, California State University-Stanislaus, Bakersfield, CA
Dr. S.S. Talmale, Zoological Survey of India, Pune, Maharashtra, India
Prof. Karan Bahadur Shah, Budhanilakantha Municipality, Kathmandu, Nepal
Dr. Susan Cheyne, Borneo Nature Foundation International, Palangkaraja, Indonesia
Dr. Hemanta Kafley, Wildlife Sciences, Tarleton State University, Texas, USA

Other Disciplines

Dr. Aniruddha Belsare, Columbia MO 65203, USA (Veterinary)
Dr. Mandar S. Paingankar, University of Pune, Pune, Maharashtra, India (Molecular)
Dr. Jack Tordoff, Critical Ecosystem Partnership Fund, Arlington, USA (Communities)
Dr. Ulrike Streicher, University of Oregon, Eugene, USA (Veterinary)
Dr. Hari Balasubramanian, EcoAdvisors, Nova Scotia, Canada (Communities)
Dr. Rayanna Hellem Santos Bezerra, Universidade Federal de Sergipe, São Cristóvão, Brazil
Dr. Jamie R. Wood, Landcare Research, Canterbury, New Zealand
Dr. Wendy Collinson-Jonker, Endangered Wildlife Trust, Gauteng, South Africa
Dr. Rajeshkumar G. Jani, Anand Agricultural University, Anand, Gujarat, India
Dr. O.N. Tiwari, Senior Scientist, ICAR-Indian Agricultural Research Institute (IARI), New Delhi, India
Dr. L.D. Singla, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, India
Dr. Rupika S. Rajakaruna, University of Peradeniya, Peradeniya, Sri Lanka
Dr. Bahar Baviskar, Wild-CER, Nagpur, Maharashtra 440013, India

Reviewers 2021–2023

Due to pausity of space, the list of reviewers for 2021–2023 is available online.

The opinions expressed by the authors do not reflect the views of the Journal of Threatened Taxa, Wildlife Information Liaison Development Society, Zoo Outreach Organization, or any of the partners. The journal, the publisher, the host, and the partners are not responsible for the accuracy of the political boundaries shown in the maps by the authors.

Print copies of the Journal are available at cost. Write to:
The Managing Editor, JoTT,
c/o Wildlife Information Liaison Development Society,
43/2 Varadarajulu Nagar, 5th Street West, Ganapathy, Coimbatore,
Tamil Nadu 641006, India
ravi@threatenedtaxa.org

Journal of Threatened Taxa is indexed/abstracted in Bibliography of Systematic Mycology, Biological Abstracts, BIOSIS Previews, CAB Abstracts, EBSCO, Google Scholar, Index Copernicus, Index Fungorum, JournalSeek, National Academy of Agricultural Sciences, NewJour, OCLC WorldCat, SCOPUS, Stanford University Libraries, Virtual Library of Biology, Zoological Records.

NAAS rating (India) 5.64



OPEN ACCESS



The Journal of Threatened Taxa (JoTT) is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at www.threatenedtaxa.org. All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use, reproduction, and distribution of articles in any medium by providing adequate credit to the author(s) and the source of publication.

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

July 2024 | Vol. 16 | No. 7 | Pages: 25495–25638

Date of Publication: 26 July 2024 (Online & Print)

DOI: 10.11609/jott.2024.16.7.25495-25638

www.threatenedtaxa.org

Articles

Spatial assemblage of shorebirds (Aves: Charadriiformes) in an altered wetland of the southern coast of Sri Lanka

– V.N. Mendis, E.J.A.P. Buddhi Priyankara, E.G.D.P. Jayasekara & W.A.D. Mahaulpatha, Pp. 25495–25506

Current conservation status of Bengal Florican *Houbaropsis bengalensis* in Manas National Park, Assam, India

– Miranda Thakur, Jonmani Kalita, Namita Brahma, Koushik Rajbongshi, Kangkanjyoti Bhattacharyya, Amal Chandra Sarmah, Alolika Sinha, Deba Kumar Dutta, Dhritiman Das & Bibhuti Prasad Lahkar, Pp. 25507–25515

Assemblages of frugivorous butterflies in two urban parks in Quezon City, Philippines

– Micael Gabriel A. Itliong, Nikki Heherson A. Dagamac & Jade Aster T. Badon, Pp. 25516–25527

Assessment of the status of *Spodoptera* species (Lepidoptera: Noctuidae: Armyworm) in India through DNA barcoding technique

– Dinesh Nalage, P.S. Kudnar, Tejswini Sontakke, Ishwar Chittapure, Yashdeep Gowda, Shantanu Kharbal & Yashashri Alamwar, Pp. 25528–25535

Taxonomy and distribution of some orthopteran species (Orthoptera: Gryllidae, Trigonidiidae, Acrididae) from northwestern Morocco

– Hanae El Harche, Samiha Kaioua & Dalale Mansouri, Pp. 25536–25544

Impact of root harvest on *Decalepis hamiltonii* Wight & Arn. population across habitats in Savandurga Reserve Forest, Karnataka, India

– M. Sathya Sangeetha, Kaliamoorthy Ravikumar & H.C. Chetan, Pp. 25545–25570

Communications

Rare encounters: Jungle Cat *Felis chaus* Schreber, 1777 (Mammalia: Carnivora: Felidae) in the lower reaches of the Jordan River, Jordan

– Ehab Eid & Mohammad Farid Alayyan, Pp. 25571–25576

Diversity of bird species in Ebpanan Marsh, Maguindanao del Norte, Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), Philippines

– Gindol Rey A. Limbaro, Benito Anthony A. Pingoy & Peter Jan D. de Vera, Pp. 25577–25583

Heleocoris stephanus (Heteroptera: Naucoridae: Laccocorinae), a new species of creeping water bug from Kallada River, Kerala, India

– Dani Benchamin, R. Sreejai & M.S. Arya, Pp. 25584–25589

Incidence and risk factors associated with parasitic infections in captive wild mammals and birds in Indian zoos

– Nikita Das, P.D. Pawar, P.P. Mhase, V.G. Nimbalkar, R.V. Jadhav, V.S. Dhayagude, Gavin Furtado & L.D. Singla, Pp. 25590–25597

Bryophyte diversity of Berinag (Pithoragarh District) in Kumaun Himalaya, Uttarakhand, India

– D. Dhami & P. Chaturvedi, Pp. 25598–25603

Short Communications

The opportunistic feeding behaviour of *Schistura notostigma* (Teleostei: Nemacheilidae) in tropical mountain streams in Sri Lanka

– J. Bandara, M.P. Gunawardena & R.T.P. Jayasuriya, Pp. 25604–25608

First record of *Pieris napi* L. (Lepidoptera: Pieridae) from Kashmir Valley, India

– Firdousa Rasool & Altaf Hussain Mir, Pp. 25609–25612

Reassessment of *Strobilanthes recurva* (Acanthaceae), an endangered plant from Manipur, India

– Rajkumari Jashmi Devi & Biseshwori Thongam, Pp. 25613–25616

New distribution record of Slender Wild Basil *Clinopodium gracile* (Benth.) Kuntze (Lamiaceae: Nepetoideae: Mentheae) for the flora of Himachal Pradesh, India

– Rimjhim Chandra & Mamita Kalita, Pp. 25617–25622

Notes

Rusty-spotted Cat *Prionailurus rubiginosus* (I. Geoffroy Saint-Hilaire, 1831) (Mammalia: Carnivora: Felidae) in the semi-natural subterranean habitat in Karnataka, India

– Shirish Manchi, Goldin Quadros, Dipika Bajpai, Shomita Mukherjee, Suma Haleholi, Mahesh Marennavar, Sangmesh Neeralagi, Prakash Ganiger, Suresh Lamani & Nikhil Kulkarni, Pp. 25623–25626

First record of Scaly-breasted Munia *Lonchura punctulata* (Linnaeus, 1758) (Aves: Passeriformes: Estrildidae) from Kashmir, India

– Shazia Shafayat, Fayaz Ahmad Ahanger, Tariq Ahmad, Bilal A. Bhat & Zakir Hussain Najar, Pp. 25627–25629

First record of *Proszynskia diatrete* (Simon, 1902) (Araneae: Salticidae) from Gujarat, India

– Manisha P. Patel & Dhruv A. Prajapati, Pp. 25630–25631

Medicago monantha (Fabaceae) and *Euphorbia jodhpurensis* (Euphorbiaceae) as new additions to the flora of Maharashtra State, India

– Praveen V. Kale & Rajendra D. Shinde, Pp. 25632–25636

Book Review

All eyes on the island: A book review of The Great Nicobar Betrayal

– Lakshmi Ravinder Nair, Pp. 25637–25638

Publisher & Host



Threatened Taxa