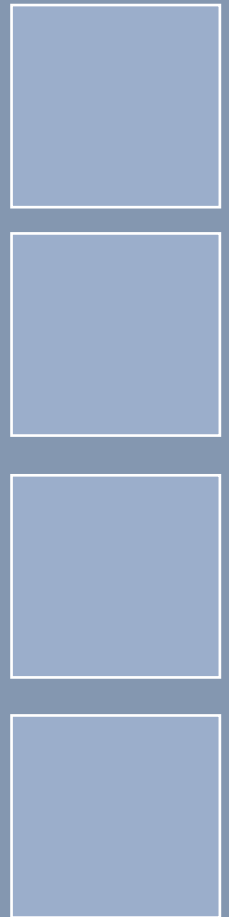


Bridging the Gaps: Capacity Building for Standardized Galliformes's Research in Pakistan



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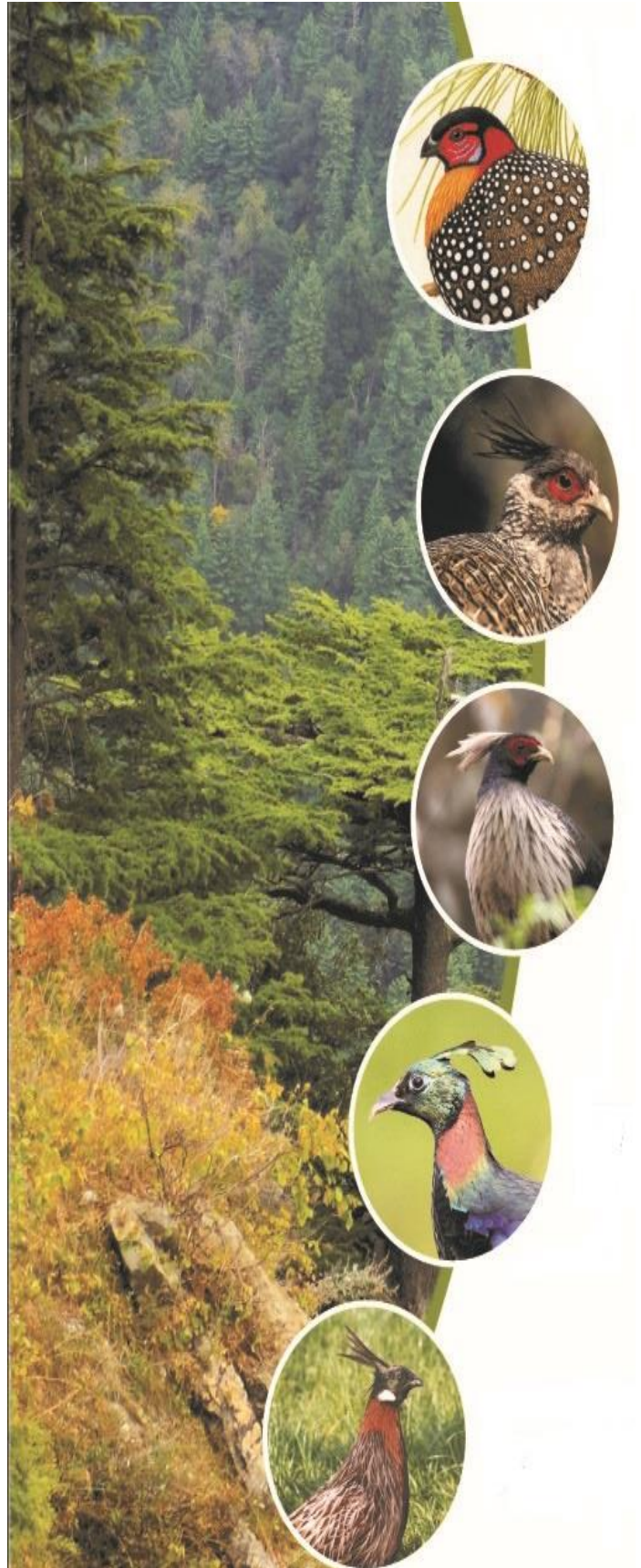
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Summary

Beside continues habitat loss and degradation, there is little current information on the distribution and status of Pakistan's Himalayan Galliformes as no countrywide reliable fieldwork has been undertaken in past. Data available is not comparable due to use of different methods. So, it's a big issue with species data which has been collected using un-standardized and experts agreed methods so that it could not be used for species status assessment. Current training is part of initiative has been taken as a first step through capacity building of the researcher and wildlife staff to collect data which can be used confidently for species status assessment.

Three workshops were organized to build the capacity of the researchers and field staff of wildlife and forest departments. In total, 155 students and field staff were trained in data collection using standardize methodologies used for Galliformes research. Two census methods were used for this training: call/point counts and line transects. simultaneously. Using a series of presentations developed by WPA, participants were trained in designing field studies for Galliformes, framing project aims and objectives, the general guidelines for study design, understanding biases and solutions for study design, observer bias, training and bird identification, and selecting census methods for Galliformes studies. Universities were recomnded to encourage students to choose Galliformes as research topic and collect data on Galliforme of Pakistan so that country wide status of species can be assesed. Further, to make participants familiar with the species and their habitat, field-based group exercises were organized that focused on designing surveys appropriate for the Himalayan terrain and species in question, as well as data collection, using Camera Traps, Global Positioning System (GPS) receivers to collect species presence data to be used for species distribution mapping.

Finally, it is recommended to continue these efforts to help support students and researchers in their research and data collection so that a clear picture if Galliformes of Pakistan can be drawn which is much needed for conservation of important species of Himalayan landscape.

Background

Assessing the conservation status of a species in the first place is often not as straightforward as it may seem because of problems of bias and inaccuracy in monitoring data (Sutherland 2000). This situation is intensified by limited amounts of available data owing for example to the rarity or elusiveness of a species, or remoteness and inaccessibility of its habitat, limitations in the number of well-trained survey personnel, non-standardised survey methods, temporal and geographical gaps between surveys or the difficulty in obtaining unpublished survey reports (Awan et al. 2016). Consequently population and abundance estimates of different Pheasants species in Pakistan are still a question mark. Strengthening the capacity of researchers is much needed than ever before to collect data using standardize methods needed to assess the conservation status of the species which need attention.

Coupled with continuing habitat loss and degradation, there is little current information on the distribution and status of Pakistan's Himalayan Galliformes as no countrywide reliable fieldwork has been undertaken in past. In recognition of these two conservation challenges, it is proposed that the conservation



FIGURE 1. HABITAT RANGE OF DIFFERENT SPECIES OF GALLIFORMES IN HIMALAYA

knowledge of these species needed to be updated but it needs consistent and comparable data collection as there is huge gape in data collection using standardize and experts agreed methods. Data available is not comparable due to use of different methods. So, it's a big issue with species data which has been collected using un-standardized and experts agreed methods so that it could not be used for species status assessment. Current training is part of initiative has been taken as a first step through capacity building of the researcher and wildlife staff to collect data which can be used confidently for species status assessment.

EDUCATION MATERIAL FOR PARTICIPANTS

A complete package of education and training material was prepared and distributed among participants of the training. A cloth bag holding picture of Cheer pheasants was prepared with the aim to serve dual purpose first holding education material and second to connect the participants with pheasants mentally. Participants were provided with this attractive bag holding papers, drafting paid, pencils and copied of presentation.



FIGURE 2. BAGS WITH CHEER PICTURE DISTRIBUTED AMONG PARTICIPANTS

In total 75 bags were prepared and printed for the participants. Some bags were handed over to head of the departments as souvenir and to be displayed in their offices. Logos of Oriental Bird Club and World Pheasant Association were also displayed on the bags.

CAPACITY BUILDING WORKSHOPS

Three workshops were organized to build the capacity of the researchers and field staff of wildlife and forest. In total, 155 student and field staff were trained in data collection using standardize methodologies used for Galliformes research. All participants were provided with training material in cloth bag with Cheer pheasant picture to attract attention of participants on pheasants. This will also help to remind them every time about the Galliformes research and their conservation in Pakistan.



FIGURE 3. PARTICIPANTS DURING THE TRAINING WORKSHOP

Two census methods were used for this training: call/point counts and line transects. Both methods are relatively simple to implement and repeat, require few observers (compared to flushing techniques), have sources of bias that can be easily controlled for, and can be used for surveying a suite of species simultaneously. The former approach is suited to surveys of Western Tragopan, Himalayan Monal, Koklass Pheasant, Kalij Pheasant, Cheer Pheasant, Indian Peafowl and Red Junglefowl. Participants were also taught to collect data from call/point counts and line transects but the best way to conduct these surveys may be to combine them with transect surveys of high elevation species. This would make good use of shared resources and maximize survey effort between field teams.



FIGURE 4. FEW TRAINING SLIDES USED DURING WORKSHOP

Using a series of presentations developed by WPA, participants were trained in designing field studies for Galliformes, framing project aims and objectives, the general guidelines for study design, understanding biases and solutions for study design, observer bias, training and bird identification, and selecting census methods for Galliformes studies.



FIGURE 5. TRAINEES FROM AZAD KASHMIR FOREST AND WILDLIFE DEPARTMENT DURING TRAINING SESSION



FIGURE 6. ANSWERING QUESTIONS OF PARTICIPANTS DURING FIELD STUDY DESIGN SESSION

University teachers were recommended to encourage students to choose Galliformes as research topic and collect data on Galliforme of Pakistan so that country wide status of species can be documented. Participants were encouraged to collect data and publish results of their research in Forktail and Birding Asia as well.



FIGURE 7 ANOTHER TRAINING SESSIONS ORGANIZED FROM THE RESEARCHERS OF HARIPUR UNIVERSITY AND KPK WILDLIFE STAFF

At the of the training sessions all participants were provided with the material used in the training so that they may use it time to time and whenever they are planning to start their research on galliformes.

Field practice of the methodologies

To make participants familiar with the species and their habitat, field-based group exercises were organized that focused on designing surveys appropriate for the Himalayan landscape and species in question, as well as data collection, understanding observer differences, identifying species, and using Camera Traps, Global Positioning System (GPS) receivers to collect species presence data to be used for species distribution mapping.



FIGURE 8. GLIMPSES OF FIELD PRACTICE BY PARTICIPANTS IN DIFFERENT AREAS

All this aimed to help enhance the current levels of experience and understanding of researchers. This training especially emphasized the need for good planning and to standardize all surveys using agreed protocols, for example in terms of census method, observer ability, timing, and data recording, a crucial point in ensuring robust data are collected during the planned large-scale survey.

Conclusion and Recommendation

There were a number of key outcomes from the training course:

The training activities provided the opportunity to identify those individuals who possessed the necessary interest, ability, including physical ability, and enthusiasm to conduct the survey. Further, created interest among researchers to understand and conduct galliformes research in Pakistan.

Two census methods are proposed for the survey of Himalayan Galliformes: call/point counts and line transects. Both methods are relatively simple to implement and repeat, require few observers (compared to flushing techniques), have sources of bias that can be easily controlled for, and can be used for surveying a suite of species simultaneously. The former approach is suited to surveys of Western Tragopan, Himalayan Monal, Koklass Pheasant, Kalij Pheasant, Cheer Pheasant, Indian Peafowl and Red Junglefowl. It is recommended data be collected from call/point counts that support distance sampling analysis, which has not been done in the past and would greatly enhance the potential value of the abundance data collected. Line transects are more suited to surveys of those species occupying the higher elevations, namely Himalayan Snowcock and Snow Partridge. The best way to conduct these surveys may also be to combine them with transect surveys of high elevation mammals. This would make good use of shared resources and maximise survey effort between field teams. With some training, and the presence of key Galliformes field staff, data could be effectively collected simultaneously for high elevation Galliformes and mammals.

A systematic approach to surveying sites based on sampling individual watersheds, minimizing or preventing spatial overlap between sampling units and maximizing site coverage with

resources available, is suitable for the general terrain, a key limiting factor to sampling design and method selection in the area, and many of the target species. This design has been used for surveying Western Tragopan in Pakistan by Awan et al (2021). A different systematic approach may be required for species occupying higher alpine elevations since the selection of optimum census method is made along broad altitudinal lines.



FIGURE 9. PARTICIPANTS DURING FIELD PRACTICE IN KASHMIR FOREST SCHOOL

To support the natural progression of the trainees and that of the survey, a second training course is recommended focusing on data management and analysis, and scientific report writing. Whereas, university students must be supported for proposal writing to apply for grants to different donors to seek help support their BS, MS and PhD research.

Further, students and researchers should be provided with clear guidelines to target species specific research to achieve the objectives of Galliformes research and conservation in Pakistani Himalayas.

