

About the Book

This volume of proceedings is a curated compilation of select research papers presented during a landmark conference on Indian Knowledge Systems (IKS). It serves as a testament to the interdisciplinary richness and timeless relevance of India's intellectual traditions. The collected works span a wide spectrum of themes, including Vedic cosmology, Ayurveda, Indian logic (Anvikshiki), classical arts, ancient mathematics and astronomy, architecture, ecology, education, linguistics, and more, reflecting the depth and diversity of scholarly engagement with India's cultural and scientific heritage.

Contributors to this volume include researchers, educators, scientists, and traditional scholars who explore the philosophical, scientific, and aesthetic dimensions of IKS through both historical and contemporary lenses. The discussions are grounded in foundational texts such as the Vedas, Upanishads, Sāṅkhya Kārikā, Vaiśeṣika Sūtra, Nyāya Sūtra, Śulbasūtras, Āryabhaṭīya, and Sūrya Siddhānta, yet they also engage with current challenges in education, sustainability, mental health, and technology.

By bridging ancient wisdom with modern inquiry, this volume highlights how IKS offers not only insights into the past but also practical frameworks for addressing present and future societal needs. The book emphasizes that Indian knowledge traditions are not relics of history, but dynamic systems capable of contributing to cutting-edge research and holistic development.

Ideal for scholars, students, and educators across disciplines, this compilation invites readers to rediscover India's intellectual legacy and explore its profound potential in building a sustainable, inclusive, and innovative future.

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Hornbill Conservation through Indian Knowledge Systems: A Blueprint for Sustainable Practices

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Abstract

The hornbill population holds the status of "Forest Farmers" as they serve vital functions in seed distribution and ecological ecosystem maintenance and forest renewal. Different landscapes demonstrate how hornbills contribute to biodiversity sustainability. Habitat fragmentation and poaching along with climate change are among the threats that endanger hornbill avian keystone species. Sustainable conservation frameworks exist within Indian Knowledge Systems because they unite traditional ecological wisdom with cultural ethics along with maintaining coexistence practices. Hornbill conservation has long been a central practice for both Nyishi tribes from Arunachal Pradesh and Ao Naga communities from Nagaland where Native people have lived peacefully with wildlife. Traditional Nyishi cultural practices show their adaptive approach to hornbill conservation through the substitution of real beak materials with fiberglass in their ceremonial headgear. Sacred groves protect hornbill demographic zones under folk conservation laws while serving as critical habitat for breeding and feeding activities since they demonstrate nature-based conservation approaches. The cultural bans against hunting during reproduction periods demonstrate how religious respect effectively maintains biodiversity. The development of sustainable biodiversity conservation strategies depends on indigenous conservation concepts affiliating with modern scientific research practices. Different ecological policies must team up with people-led governance platforms and ethnic ornithological research to maximize conservation results. The Research Article shows why hornbills serve as ecological sentinels while arguing for essential IKS sustainability principles to be incorporated with modern conservation methods for safeguarding birds alongside their habitats.

Keywords: Hornbills, Sustainable conservation, Indian Knowledge Systems, Conservation strategies, Ecological policies

Introduction

Hornbills, belonging to the Bucerotidae family, are ecologically significant avian species that play a crucial role in seed dispersal and forest regeneration (Datta, 2001). These birds are often referred to as “farmers of the forest” due to their frugivorous diet and their contribution to maintaining biodiversity in tropical ecosystems (Kinnaird & O’Brien, 2007). India is home to nine species of hornbills, found primarily in the northeastern states, the Western Ghats, and parts of central India (Mudappa & Raman, 2009). However, habitat