From Extinction to Extension: Rediscovery of Gavial (*Gavialis gangeticus*) in Pakistan

Waseem Ahmad Khan¹, Bilal Mustafa¹, Sahar Suleman¹, Atif Yaqub², Tanveer Janjua³, Ghulam Rasul³, Wajiha Iftikhar³ and Mudassar Hussain³

¹Pakistan Wildlife Foundation, Islamabad, Pakistan

²Government College University, Lahore, Pakistan

³Punjab Wildlife & Parks Department, 2-Sanda Road, Lahore, Pakistan

Correspondence author: Waseem Ahmad Khan, Email: khanwa@hotmail.com

Running Title: Rediscovery of Gavial in Pakistan

ABSTRACT

Gavial (Gavialis gangeticus), the critically endangered species, has long been extinct from Pakistan. Since the 1990s there has been no confirmed significant sighting in Pakistan; however, a local fisherman in the Ganda Singhwala region of the Satluj River accidentally captured a Gavial in 2023. This sparking renewed the wildlife experts' interest in the species' existence in Pakistan and led to subsequent field investigations conducted by experts from the Punjab Wildlife & Parks Department and Pakistan Wildlife Foundation that aimed to confirm the presence of Gavial in the Satluj River. A 5 km stretch of the river was surveyed along the river channel in Pakistan by using a combination of direct and indirect observation methods. A total of five potential Gavial habitats, including two breeding sites, were identified in the whole study area. The presence of the species in Pakistan marks a significant ecological rediscovery after three decades of absence that might be due to potential cross-border migration from India, where extensive conservational efforts have been conducted. This study emphasizes the ecological importance of Gavial reappearance and underscores the need for transboundary conservation collaboration. The present finding also highlights the ongoing threats to the Gavial which should be addressed for the long-term survival of species in Pakistan.

Keywords: Ganda Singh Wala, Gavial, Gharial, Satluj River