fields, but they have different scaling numbers in outcome. So, Figure 1 provides an overall fingerprint diagram for all the countries.

We can also consider one characteristic for differentiating developed and developing countries, which is the top 1 field. Developed countries show top 1 as clinical medicine, whereas developing nations occupy top 1 with chemistry. Certainly, different countries hold different outcome.

The national scientific fingerprints provide a meaningful and interesting reference for academic comparison at the national level. Fingerprint change means important development.

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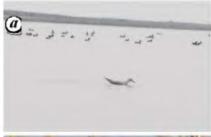
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## Pong Dam Wetlands Sanctuary: a heaven for waterfowls

The Pong Dam on the Beas River, Lower Himalaya, is the second largest manmade reservoir in Himachal Pradesh. The location and dimensions of the Pong Dam lake make it an appropriate habitat for drifting birds entering the plains of India from Central Asia. Pong Dam is home to the Bar-headed goose, one of the highest flying birds in the world; it can fly at a height of about 11,000 m.

In February 2008 during the annual waterfowl census at the Pong Dam, we recorded two species (Slender-billed gull





**Figure 1. a**, Slender-billed gull (*Chroicocephalus genei*); **b**, Ferruginous Poachard (*Aythya nyroca*). (Courtesy: A. Pragatheesh.)

and Ferruginous Poachard) new to the wetland sanctuary (Figure 1). The Slender-billed gull, a medium-sized bird with elongated head and bill, and belonging to the family Laridae, is distributed from Senegal through the Mediterranean to east Kazakhstan and northwest India<sup>1,2</sup>. It normally breeds in western Indian Ocean and has been recorded from Gujarat<sup>3</sup>, Punjab, Delhi<sup>4</sup> and Kerala<sup>5</sup>. The observed solitary bird was white in colour, with a pinkish tinge extending from the neck to breast. During summer, Slenderbilled gulls are recorded to have pinkish colouration near the breast<sup>4</sup>. Even though the IUCN conservation status of this bird is considered as Least Concern, its distribution in India is limited.

Ferruginous Poachard (Aythya nyroca) is a winter visitor to the Indian subcontinent<sup>2</sup>. It has been recorded from Pakistan, Bangladesh, northwest India, Manipur, Kerala<sup>6</sup>, Delhi, Gujarat, Haryana, Jharkhand, Madhya Pradesh, Rajasthan, Punjab, Uttar Pradesh, Uttarakhand<sup>4</sup> and Assan barrage, in Himachal Pradesh<sup>7</sup>. The observed bird had chocolate-coloured body and a dome-shaped head with pure white undertail. This species has undergone a decline in population and change in distribution in the past few decades<sup>6</sup>. According to the IUCN conservation status, this species is considered as Near Threatened8.

Over 250 bird species belonging to 54 families have been recorded in Pong Dam. Water bird census was initiated in 1985. Pong Dam Wetlands has emerged as a major habitat for migratory birds in

the country, as also an attraction for bird-watchers. More than 150,000 migratory birds visit this area. One of the major threats to avifauna is fishing; fishermen regularly use motor boats which is a major concern for diving birds. The Forest Department needs to protect land birds like Saras crane and Bar-headed goose which feed in crop lands. If the Forest Department regulates the fishing activity, then the Pong Dam will be a heaven for wetland birds.

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