
Information and Announcements



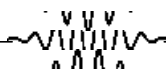
Careers in Nature Conservation : The Wildlife Institute of India

Conservation of natural ecosystems, resources, and the diversity of living creatures is a major concern of humans today. As natural habitats shrink and disappear, species are being driven to extinction in many parts of the world. Most countries have therefore established sanctuaries, nature parks, and protected areas, as well as laws and institutions to tackle environmental problems. Within India, a premier institution dealing with nature conservation is the Wildlife Institute of India in Dehradun, Uttar Pradesh.

The Wildlife Institute of India (W.I.I.) was established in 1982 by the Ministry of Environment and Forests (MoEF) of the Govt. of India. By 1986, it was granted autonomy to pursue research, training and educational activities, while continuing to function under a governing body chaired by the Secretary of the MoEF. Today, W.I.I. is widely recognised as a major research and training institution in the field of nature conservation, management, and research in India.

The Institute has two major objectives. The first is research — mainly applied ecological research on endangered species, critical ecosystems and biogeographic areas. There is a strong emphasis on field-based research that addresses real-world conservation and management issues. The second focus is on education and training. Besides courses for in-service forest officers and wildlife managers, W.I.I. offers M.Sc. and Ph.D. degrees in wildlife science. In addition, the institute also provides expertise and consultancy services relating to wildlife and protected area management, environmental impact assessment, and environmental education and interpretation.

M.Sc. Wildlife Science: One of the major attractions of W.I.I. is the 2-year Masters programme in Wildlife Science. Students in this programme take three semesters of intensive course work in various relevant fields of ecology, behaviour, conservation, and management. Simultaneously, they



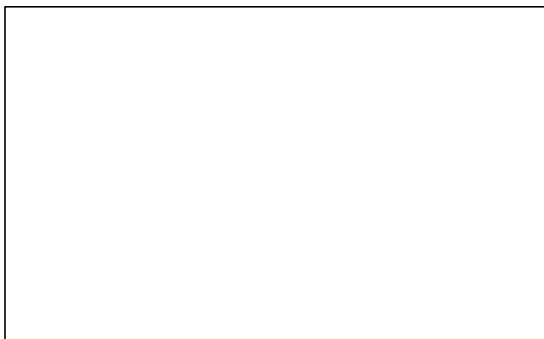


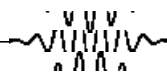
Figure 1 Snow-capped Himalayan peaks form a scenic backdrop to the W. I. I. campus buildings in winter. (Photograph by S Wilson).

undergo field training in various protected areas in different parts of India — an aspect of the course that the students invariably enjoy the most. The final semester is set aside for a field research project by the student (see *Box 1*). The courses offered at W.I.I. include various compulsory and optional subjects such as population and community ecology of plants and animals, biology of Indian wildlife ranging from invertebrates to mammals, animal behaviour, conservation biology, wildlife and forest management, habitat ecology, advanced field techniques, and quantitative methods in biology.

Admission to the M.Sc. course is offered every alternate year through a national entrance test. Usually, about 7-10 students are admitted, and at least six are provided a fellowship of Rs. 1,200/- p.m. during their course, in addition to extra funds for the final six-month field research project. Admissions will open again in 1997. Students are usually given a three-month additional

fellowship of Rs. 2,000/- p.m. after completion of their M.Sc. course, and are encouraged by the faculty to prepare manuscripts for publication in journals and popular periodicals. Thus, in addition to their M.Sc. thesis, several students have research publications resulting from their work in national and international journals. Students who have graduated from the course have later joined various environmental NGO's, academic institutions, or gone ahead with further studies for a doctoral degree in the field.

Ph.D.: Every year, research projects are initiated by the various faculty of W.I.I. and candidates are awarded Junior Research Fellowships after an entrance test (usually in December) and interview. The candidate can register with the Saurashtra University (to which W.I.I. is affiliated) or other universities for their Doctoral degree. There is no course work involved and the students can directly begin their field research. Those interested in specific projects or more details can contact



Some Research Projects Undertaken by W.I.I.'s M.Sc. Students.

(1) Effects of disturbance, salinity, and oil pollution on coral islands in the Gulf of Kutch.

Coral islands remind many of blue seas and summer vacations (*Figure 2*). They are, however, among the most critically endangered ecosystems, threatened by pollution, exploitation, and tourism, among other things. In an interesting field study in the Marine National Park in the Gulf of Kutch, Rohan Arthur addressed this important conservation issue. Comparing Pirotan and Narrara islands, he found that the former had higher levels of species diversity of coral as well as higher levels of disturbances such as sediment load, algal cover, and bleaching. This harkens back to the idea that intermediate levels of disturbance might help maintain higher diversity levels in the tropics. Rohan also set up experiments in the field to test the effect of crude oil (a common pollutant) and bittern (high concentration salt solution, a by-product of the nearby salt pans) on coral boulders. Comparing with controls, he found that both pollutants resulted in coral bleaching and sediment deposition on the now-inactive polyps. While recovery of corals was swift, Rohan's results indicate that chronic pollution and high sedimentation in turbid reefs would be detrimental to the coral communities.

(2) Are common langurs fussy about what they eat?

For people who prefer *haute cuisine* and caviar, animals that eat leaves must seem the most unselective creatures, with really bad taste, perhaps. Nevertheless, there's more to this than meets the taste buds. The common or Hanuman langur, one of the most common monkeys of India, is a leaf eater (*Figure 3*). Kaberi Kar-Gupta observed the kinds of leaves the langurs ate during winter and spring in Rajaji National Park in U.P. She found that langurs fed on parts of 51 plant species, including leaves, seeds, fruits, and flower buds. Eight plant species, however, accounted for 80% of their diet. In winter, when mostly mature leaves were eaten by the langurs, she found that they apparently chose species which had higher protein and lower fibre levels. In spring, when young leaves were abundant, the langurs were not choosy about the protein levels, and appeared to be mainly avoiding a high-fibre diet. Her results showed that langurs are quite careful about what they eat and their diet varies with the leaf properties of the tree species in their habitat.



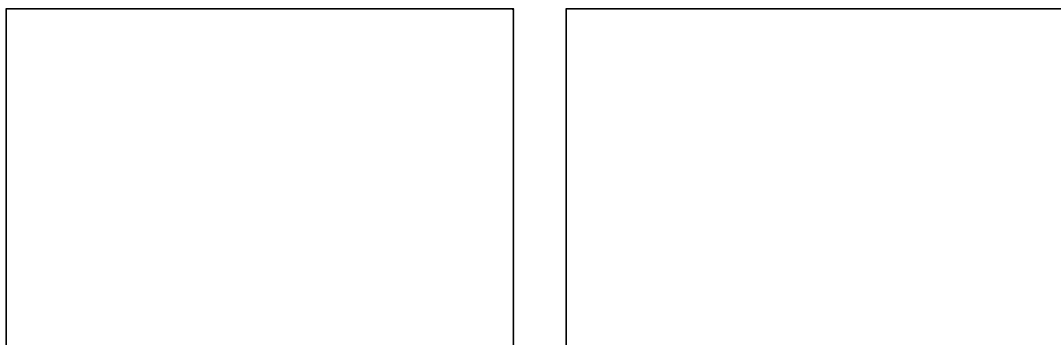


Figure 2 (top-left) Corals in the waters of the Marine National Park in the Gulf of Kutch, Gujarat - threatened by pollution and industrialisation. (Photograph by B C Choudhury).

Figure 3 (top-right) A young Hanuman langur (*Prebytis entellus*) rests languidly on a tree trunk after its morning bout of feeding. (Photograph by T R Shankar Raman).

the Wildlife Institute at the address given below

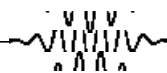
Ravi Chellam, Research Coordinator, Wildlife Institute of India, P. B. No. 18, Dehradun 248 001, U. P., India. Phone: (0135) 640112-640115, Fax: (0135) 640117, email: wii.isnet@access.net.in

Campus, Facilities, and Faculty

The W.I.I. campus is located amidst scenic surroundings on the outskirts of Dehradun town, in the Dehradun valley, between the Siwalik hill ranges and the Himalaya (*Figure 1*). The campus has an excellent and growing library with numerous international journals, books, e-mail, and modern electronic

reference facilities. The computer centre has IBM and Macintosh computers, DOS and UNIX systems, LAN and advanced computer software. There is also a state-of-the-art Geographical Information Systems centre for analysis of spatial data, satellite imagery, and aerial photographs. The faculty of W.I.I. are in three divisions: wildlife biology, wildlife management, and wildlife extension. There are at present 22 faculty members and over 25 Research Fellows in W.I.I.

The institute has hostel and mess facilities and quarters for the teaching staff on campus. A canteen and nearby *chai* shop are the centres for much discussion on wildlife, natural history, conservation, and less academic, but equally absorbing topics for



the students. There are tennis, badminton, volleyball, and basketball courts on campus, a cricket-cum-football ground nearby, plus indoor table-tennis for those interested in sports. Nearby *sal* forests, a small patch of scrub vegetation on campus, are the regular haunt of the campus ornithologists and naturalists. Besides this, Rajaji Tiger Reserve, a few kilometres away, with a field-station

and ongoing research and monitoring projects, is often visited by the students and researchers.

T R Shankar Raman obtained a Masters degree in Wildlife Science from the Wildlife Institute of India, Dehradun. He is currently a research scholar at the Centre for Ecological Sciences in the Indian Institute of Science.

Books Received



<p><i>Stoichiometry (SI units). III ed.</i> B I Bhatt and S M Vora Tata McGraw Hill 1996, Rs.180.</p>	<p><i>Digital Libraries. Dynamic Store-house of Digitised Information</i> N M Malwad, T B Rajasekar, I K Ravichandra and N V Satyanarayan New Age International 1995, Rs.475.</p>	<p><i>Tensor Calculus, Theory and Problems</i> A N Srivastava Universities Press 1994, Rs.50.</p>
<p><i>Optimization Methods in Operations Research and Systems Analysis. III ed.</i> K V Mittal and C Mohan New Age International 1996, Rs.135.</p>	<p><i>Elements of Cosmology</i> J V Narlikar University Press 1996, Rs.65.</p>	<p><i>Science Matters</i> Robert M Hazen and James Trefil University Press 1991, Rs.135.</p>

