were observed as they pollinated the flowers. However, honey bees are unable to buzz-pollinate, unlike, for example, bumble bees (*Bombus* spp.), which show a preference for flowers such as those of *Solanum*, with poricidally dehiscent anthers (Figure 1). So, although outcrossing (via cross-pollination) was demonstrable in the two studies, it is likely that the use of an appropriate insect vector would have favoured a more realistic and considerably higher incidence of outcrossing.

In consideration of the above, pollen transfer should be regarded as a major factor in generating biosafety risks associated with *Bt* brinjal. The neglect of pollen transfer tests would thereby disregard this potential hazard. Furthermore, any investigations into this factor should involve a wide range of potential recipient species, including cultivated *Solanum* relatives, other than brinjal. For a thorough assessment to be possible, data which are extensive, interpretable and unambiguous must be made available.

At the moment, consideration[1] is being given to post-moratorium information[17] relating to the scope and adequacy of the environmental risk assessments undertaken during the development of *Bt* brinjal. The outcomes and implications for biosafety remain to be seen.

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Phoenix rupicola in the Eastern Himalaya

Endemic to the Eastern Himalaya, the scarce Cliff Date Palm (*Phoenix rupicola* T. Anders.) is under serious consideration for immediate conservation measures and redemptive action in Sikkim today. Recent count has revealed a total of 121 individuals within an estimated 11,000 sq. km of the Sikkim Himalayan expanse and under ca. 1.5 sq. km of actual area of occupancy (AOO). This makes it a strong contender for being labelled as Critically Endangered species under the IUCN Red List of Threatened Plants[1] (at present it is assigned Near Threatened category). These plants have been recorded earlier in the Sikkim Himalaya[2,3].

Among the few pinnate-leaved palms of India (total 14 species), only about 3 species grow in the foothills and submontane region, of which *P. rupicola* is in danger of total disappearance if recovery measures are not implemented soon. Encroachment in its natural habitat and related anthropogenic activities are causes for limiting its habitat and regeneration potential. These palms are normally found growing at the forest outliers, mostly close to the streams and characteristically over steep rocky slopes (L. *rupicola* = of the rocks). Of these three habitat classes, the first two are easily accessible and therefore more susceptible to disturbance and degradation. If proper conservation measures are not implemented, the species may soon become extinct.

As the trunk of the palm is rich in starch, it was earlier cut down for getting the sago-like pith by the natives, which was subsequently processed for human consumption. This practice has made a

Figure 1. *Phoenix rupicola* in natural habitat at Pashoke, ca. 1060 m amsl.

perceptible dent on its availability status at present. This palm is dioecious (male and female flowers on different plants), which may hamper its reproductive process due to loss or acute shortage of male or female plants. Little information is available on its reproductive biology, growth and development mechanism as well as ecological processes, especially with regard to its population ecology and survival dynamics.

The plants are presently recorded from three locations in the Sikkim Himalaya, viz. Sivok (site no. 1, altitude 194 m, 26°52′57″N–88°28′00″E, 99 individuals) (Figure 1), Pashoke (site no. 2, altitude 1060 m, 27°04′45″N–88°23′15″E, 15 individuals) and Kasur (site no. 3, altitude 340 m, 27°09′10″N–88°21′35″E, 7 individuals). Human activities and vehicular movement have been greatest at site no. 1, followed by site nos 2 and 3. Under this scenario, the population at site no. 1 will be the first to become extinct unless effective conservation measures are implemented soon. The observed mature plants produce large amount of seeds which owing to the acutely inclined habitat fall directly into the streams or among the thick vegetation at the foot of cliff.

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Conserve the endangered science, taxonomy

The recently organized refresher course on 'traditional and modern approaches in plant taxonomy' and the forthcoming refresher course on 'traditional and modern approaches in animal taxonomy' by the science academies of India are worthy initiatives, as taxonomy is the oldest science in biology. India is one of the megabiodiversity countries and it is high time we inculcate awareness about this important discipline. Indeed taxonomy as one of the oldest sciences continues to exist along with human existence; plants and animals can live without man, but man cannot live without them. Although some species are disappearing fast, there are many faunal and floral species that need to be documented. Such an important study is ignored by students, researchers, reviewers, funding institutes, etc., except as a piece-meal syllabus at school/college curriculum. The least-funded scientific discipline in biology is taxonomy. Such an attitude leads to misidentification of popularly known species too.

We quote two examples from *Current Science.* These mistakes came to light as the photographs of wrongly identified species appeared on the cover page. Normally the cover-page photograph is not peer-reviewed and hence the sole responsibility of the identification rests with the authors.

Bandyopadhyay *et al.*[1] reported the pharmacologically active fatty acids of tiger prawn *Penaeus monodon*, a marine crustacean. However, the photograph that appeared on the cover page of the journal was a freshwater prawn belonging to the genus *Macrobrachium.*

Mahato *et al.*[2] also made a similar mistake in the identification of bats. The photograph that appeared on the cover page of the journal was identified as *Pteropus giganteus*, the Indian flying box; the error of misidentification was rightly pointed out by a rejoinder[3]. Mistakes of this kind result from poor knowledge in taxonomy. Carl Linnaeus alone estimated 26,500 species throughout the world. Though we have sophisticated equipment and techniques, we are unable to estimate how many species of animals and plants live today. Hence it is time the national institutes and funding agencies encourage taxonomic work and grant ample finance assistance to strengthen the knowledge base in taxonomy.

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