

New England Botanical Club- Minutes of the 985th Meeting 7 February 2003 Art Gilman, Recording Secretary *pro tempore*

The 758th meeting of the New England Botanical Club, being the 985th since its original organization, met on Friday, 7 February 2003, in the Lecture Room of the Fairchild Biochemistry Building, Divinity Avenue, Cambridge MA. Thirty members were in attendance despite a severe winter storm that brought a foot of snow that afternoon.

President Paul Somers conducted the regular meeting. The main item of business was the presentation by Dave Lovejoy, representing the Nominating Committee, of the proposed slate of officers for the next year, to be voted on at the Annual Meeting in March. Paul announced that a proposed Club field trip to the southern Appalachians, tentatively announced at the January meeting, would likely be held in 2004 rather than this year, due to scheduling conflicts. Next, Art Gilman reviewed the upcoming programs for the rest of the year.

This evening's scheduled speaker was unable to attend due to the snowstorm, prompting a change in the program. Therefore, Kanchi Gandhi introduced Rebecca Pradhan, of the Royal Society for the Protection of Nature, Bhutan, and a visiting scholar at Harvard University Herbaria, who spoke to the Club on "***Rhododendrons and Conservation in Bhutan.***" She showed spectacular pictures of the many plant communities of Bhutan, with emphasis on her main research taxon, the genus *Rhododendron*. Rebecca was trained as a mathematician, but also has a Diploma in Horticulture from the University of Edinburgh. She has spent the past 18 years in forest research in Bhutan, where she is a pioneer in establishing a national herbarium and in conservation education.

Ms. Pradhan introduced Bhutan as a small country with extreme ecosystem diversity, with an elevational range from 100m to 7000m. The country is 72.5% forested while cultivated lands cover only 8.1% of the surface. Fortunately, there is a well established system of four National Parks, four Wildlife Sanctuaries, and one strict Nature Reserve to safeguard the outstanding flora of Bhutan, to date known to include 5600 species, of which 80 are endemic. There are two endemic genera: *Chromopanax*, Araliaceae, and *Bhutanthera*, Orchidaceae. Perhaps as important, and very forward-looking, is that biological corridors linking these preserves have been established to assure connectivity of the communities over time.

Focusing first on the various major communities, Rebecca led us through a tour of the forests of Bhutan from subtropical to subalpine. Lowland forests feature large trees of *Terminalia*, *Morus*, and *Ficus*. There are many orchids, including showy species of *Dendrobium* and *Phaius*. Warm broadleaf forest and chirpine (*Pinus roxburghii*) forests are next in elevation. Chirpine forest, although quite dry, has many epiphytes, including *Dendrobium falconii* and *Ceropegia* sp. The *Cymbidium hookerianum*, common to this forest type, is a delicacy in Bhutanese cuisine. Moist evergreen forest features trees of the genus *Persea*, *Magnolia*, *Acer* and *Quercus*, and also large bamboos (*Borinda grossa*), used locally in making brooms and bamboo mats. Dry broadleaf forest is dominated by oaks, *Quercus griffithii*, and *Quercus lanata*. Further up slope, conifer forests and alpine vegetation dominate, with many beautiful flowering genera, such as *Cypripedium*, *Meconopsis*, *Primula*, *Aconitum*, and *Senecio*.

Bhutan has 46 species of *Rhododendron*, of which four are endemic: *R. kesangiae* (named after the Queen Mother of Bhutan), *R. bhutanensis*, *R. pogonophyllum*, and *R. flinckii*. Only one, *R. arboreum* occurs in lowland forests. There are ten species in the warm broad-leaved forests, but 34 species occur in the cool broad-leaved forest, with maximum diversity at approximately 3500-4000m. About 14 species occur in the alpine shrub community. There are at present few identified threats to rhododendrons in Bhutan. Although several have economic uses (for incense, for wood carving, even for insecticide) the level of exploitation is small. Rebecca has published a book, "Wild Rhododendrons of Bhutan," (Thimphu, 1999) and is helping to establish an *in situ* Rhododendron Garden at the Thrumshingla National Park; currently there are 22 species growing together. Unfortunately, its opening in May 2002 was on a cold and snowy day. Even the blood pheasants and tragopans in attendance looked glum!