

# *Phoenix loureiri* var. *humilis*, a New Record for Bhutan

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1. *Phoenix loureiri* var. *humilis*, growing near Wangdi Phodrang, Bhutan (Photo: P. Cribb).

*Phoenix loureiri* Kunth var. *humilis* (Becc.) Barrow is newly reported from Bhutan. Sightings of two other *Phoenix* species are also reported from Bhutan.

Wangdi Phodrang lies at the junction of two tumultuous rivers, the Mo Chu and the Mara Chu, which arise in the high Himalayas of central Bhutan. The town occupies a ridge overlooking

the junction of the rivers and is dominated at its southern end by the imposing fortress monastery (*dzong*), of Wangdi. Running south from the town is a deep rather dry valley that gradually falls to



2. *Phoenix loureiri* var. *humilis*, with immature fruit (Photo: P. Cribb).

the plains that border the Bramaputra River in north-west India. The relative dryness of the valley is surprising in a country that is dominated by the monsoon that arrives in June and lasts until September, but dry valleys are not uncommon in the Himalayas where they lie in the rain shadow of mountains to their south. The aridity is compounded by the south winds that blow strongly and persistently nearly every afternoon. Driving down this spectacular valley, we encountered groves of a small pinnate-leaved palm in fruit on the valley sides. The stems reached about a meter tall in the larger specimens (Fig. 1). The leaves were about 1.5 m long and the erect inflorescences had yellow flattened stems topped by several short suberect branches, bearing fruits similar to those of wild olives in size and color (Fig. 2).

We tried to key it out in the *Flora of Bhutan*, a rare Flora that is handy enough to carry into the field. It keyed out to *Phoenix loureiri*, a palm not previously recorded from Bhutan. John Dransfield subsequently confirmed the identification as *P. loureiri* var. *humilis* (Becc.) Barrow (1998). The *Flora* reports it from nearby Duars of India and from the Darjeeling area.

The palm is distributed for several kilometers down the valley from about 1100 to 900 m elevation, higher than the elevation range given in the *Flora* account but within the range, up to 1700 m, given

by Barrow (1998). This region is sparsely populated but grazed by nomadic herds of cattle and other livestock. The palm grows in small to large colonies on steep dry grassy slopes with scattered *Pinus roxburghii*, usually on slopes that face east or south-east. They were fruiting at the start of the monsoon season in early June. On the opposite side of the valley, in a hanging meadow, *P. loureiri* seemed to be absent.

Further to the south-east and north-east of Gaylephug, two larger *Phoenix* species were seen growing on steep cliffs and in subtropical forest, often near waterfalls, at between 500 and 900 m elevation. One of these, with a slender elegant trunk and just coming into flower, was *P. rupicola* T. Anderson. It formed small colonies on almost vertical rocks, probably gneiss (Fig. 3). It has been reported previously from Samchi, Sankosh, Gaylephug and Deothang districts of Bhutan. The other we were unable to identify certainly because we could not get close enough to it, but it may have been *P. sylvestris* (L.) Roxb., which is common in the nearby Darjeeling area.

#### LITERATURE CITED

- BARROW, S. 1998. A revision of *Phoenix* L. Kew Bull. 53: 513–575.
- NOLTIE, H.J. 1994. Family 234. Arecaceae. Flora of Bhutan 3(1): 408–431.

3. *Phoenix rupicola* is well named; near Gaylephug, Bhutan, it grows on vertical cliffs (Photo: P. Cribb).

