NAGALAND

State Tree: Rupo (Angami).

Botanical Name: Alnus nepalensis D. Don

Family: Betulaceae.

Vernacular Names: Alder Tree, Himalayan Alder, Indian Alder, Nepal Alder (English); Utis (Hindi); Alnas (Mizo); Boshi Swa, Utis (Nepali).

Etymology: ‘Alnus’ is the ancient Latin name, for the alder, and the specific epithet, ‘nepalensis’ refers to its type locality, Nepal.

Description: A large deciduous tree, to 30 m tall; bark smooth, grey or dark grey; branchlets spreading, glabrous, dark brown. Leaves simple, alternate, elliptic or elliptic-lanceolate, narrowed or rounded at base, entire or somewhat denticulate at margins, acute at apex, 6.5 – 17.8 × 3.8 – 9 cm, coriaceous, glabrous above, slightly pubescent along the nerves beneath when young, usually glaucescent and minutely resinous-dotted; lateral nerves 10 – 18 on either half. Flowers unisexual, green. Male spikes in terminal drooping panicle, 10 – 25 cm long; flowers in clusters of 6 – 12; bracts 3–flowered with 3 – 5 adnate bracteoles; perianth 4–lobed; stamens 4, mixed with ciliate scales under each bracts; anthers subsessile. Female spikes erect, short, 5 – 8 mm long; flowers pendulous;
bracteoles 2 – 4, minute; perianth absent; ovary superior, 2-loculed; ovule 1 in each locule; styles 2; stigma producing beyond bracteoles. Fruit a strobilate spike, oblong, 1.5 – 2 × 0.7 – 1 cm, woody with persistent bracts; seeds ca 4 × 3 mm, winged, surmounted by the persistent style.

**Flowering & Fruiting:** October – December and February – March.

**Range of distribution:** Bhutan, China, India, Myanmar, Nepal and Pakistan.

**Economic Importance:** Bark is a source of tannin (7%). It is used with *Rubia* sp. in dyeing to deepen the colour. It is also occasionally used for making boxes and in light construction works and as firewood.

**Traditional Knowledge:** Plantation of Alder after Jhum is being promoted through Village Development Boards (VDBs) in Nagaland and that these same boards are also investigating a whole range of species to strengthen the tree components of the shortened Jhum cycle. Community participation in this effort is ensured by the VDBs, created on the basis of the value system of individual ethnic group. With more than 35 ethnic groups involved, all VDBs have the same function: participation in fallow management efforts for a redeveloped Jhum.

**Medicinal Uses:** Leaves are used in cuts and wounds. The roots are used in diarrhoea, dysentery and stomachache.

**Note:** It regenerates naturally in freshly exposed landslide affected soils, degraded and disturbed sites. Being an actinorhizal plant produces root-nodules that are capable of fixing atmospheric Nitrogen, it is planted after the fire in Jhum cultivation and as Nurse Plant in Cinchona plantation.

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