13 *Catunaregam spinosa* (Thunb.) Tiruv. ssp. *spinosa*
(Madanphal)

The drug consists of dried fruit of *Catunaregam spinosa* (Thunb.) Tiruv. ssp. *spinosa* (syn. *Randia dumetorum* (Retz.) Poir.; *R. dumetorum* sensu Hook.f. p.p., non Lamk.; *Xeromphis spinosa* (Thunb.) Keay) (Plate 13.1 A, B & C); Fam. Rubiaceae. The plant is a small tree or rigid thorny shrub found in the foot hills of Himalayas from Punjab eastwards up to 1200 m in hills and in peninsular India.

A. Plant

B. Fruiting twig

C. Dried fruits

D.LS and TS of fruit **E**. Seeds

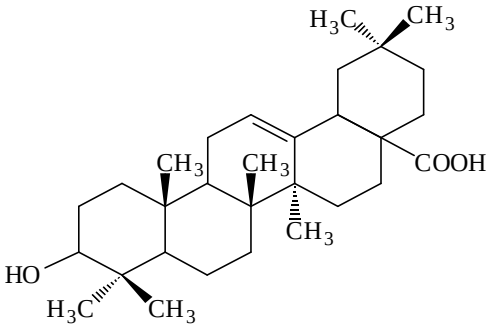
Plate 13.1 *Catunaregam spinosa* (Thunb.) Tiruv. ssp. *spinosa*

Chemical Constituents

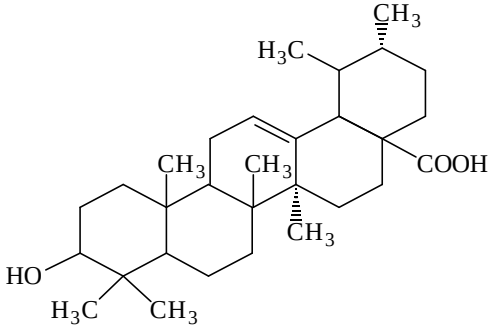
Major

Randisoide A, dumetoronin A, B, C, D, E, F, ursosaponin which on hydrolysis gives ursolic acid; triterpene saponins : 3-*O*-[*β*-D-xylopyranosyl] oleanolic acid, 3-*O*-[*β*-D-glucopyranosyl-(1→3)-*β*-D-galactopyranosyl] oleanolic acid, 3-*O*-[*β*-D-

glucopyranosyl-(1→2)-*β*-D-glucopyranosyl-(1→3)-*β*-D-galactopyranosyl] oleanolic acid, 10-methylixoside, 3-*O*-[*O*-*β*-D-glucopyranosyl-(1→4)-*O*-*β*-D-glucopyranosyl-(1→3)-(*β*-D-glucuronopyranosyl)] oleanolic acid, 3-*O*-[*O*-*β*-D-glucopyranosyl-(1→6)-*O*-*β*-D-glucopyranosyl-(1→3)-(*β*-D-glucuronopyranosyl)] oleanolic acid, 3-*O*-[*O*-*β*-D-glucopyranosyl-(1→2)-(*β*-D-glucopyranosyl)] oleanolic acid, 3-*O*-[*O*-*β*-D-glucopyranosyl-(1→3)-(*β*-D-glucuronopyranosyl)] oleanolic acid, 3-*O*-[*O*-*β*-D-glucopyranosyl-(1→3)-(*β*-D-glucopyranosyl)] oleanolic acid (randianin), 3-*O*-[*β*-D-glucopyranosyl] oleanolic acid, 3-*O*-[*β*-D-glucuronopyranosyl] oleanolic acid.



Oleanolic acid



Ursolic acid