

PART - I

INVESTIGATION ON THE BARK OF SAPINDI BACULATI ROAD. •
ISOLATION AND STRUCTURE ELUCIDATION OF A NEW MON-
TRITERPENE, C₂₉H₄₆O₄; M.P. 228-3°, (α)_D -2.00°.

CHAPTER-I

Morphological features of the plants of Euphorbiaceae family, Sapium species and Sapium lacostei Horb.

Euphorbiaceae^{1a} is a family of two hundred genera and more than three thousand species, which are chiefly tropical and very rare in cold countries.

Morphological features: Members of this family are usually shrubs, herbs or trees, often with milky juice.

Leaves alternate or opposite, rarely divided or compound, usually stipitate. Inflorescence various; flowers usually small, often minute, always unisexual. Perianth simple and calycine, rarely petioled, often wanting in one or both sexes, rarely double, with the inner of 4-5 minute petals. Stamens various; anthers 2-lobed, often didymous. Ovary superior, of 3, rarely more, or 2 carpels, more or less united together; styles as many as the carpels, free or united, entire or divided, stigmatic surface usually on the inner face of the styles or style-arms; ovules 1-2 in each carpel, pendulous from the inner angle of the cell; funicle often thickened. Fruit either a capsule of 2-valved 1-2 seeded cocci separating from a persistent axis, or a drupe with 1-3 cells, or of one or more combined nuts. Seed laterally attached at or above the middle of the cell, with or without an aril or thickening at the hilum. Embryo straight, in a fleshy albumen, with flat cotyledons and a superior radicle, very rarely

exalbuminous with fleshy cotyledons.

Sapium, P.Br.^{1b} : Sapium species are usually trees or shrubs. Leaves alternate, entire, serrate or toothed, pinninerved; petiole often 2-glandular at the top. Flowers in terminal single or panicle spikes or racemes, monoecious, apetalous; males several in each bract; females in the lower part of the spike, or in separate spikes, solitary in the bracts. Disk 0. Male flower, calyx membranous, shortly 2-3 lobed or toothed, or split to the base into 2-3 valvate sepals. Stamens 2-3, filaments free; anther cells ovoid, distinct, contiguous, parallel. Stylilode 0. Female flower, calyx 3-fid or partite. Ovary 2-3 celled; styles free or connate at the base, spreading and recurved, undivided, cells 1 - ovoid. Capsule crustaceous, fleshy or pulpy, rarely woody, at length loculicidally 3-valved. Seeds globose, retro-phyllate, usually long persistent on the volumella, testa crustaceous, albumen fleshy, cotyledons broad, flat. Number of species - twenty five, all tropical.

Sapium baccatum Roxb.^{1c, 1d} : Nepali name - Thekiphel or Ankhatarua. It is a handsome, straight, occurring here and there in Sal Forest and Mixed Forest. It flowers in April and May. In Bengal, it is available in the Terai hills and plains. Leaves 3-8 inch, tips very slender; nerves 6-10 pair, very slender; petiol 1-3 inch, Racemes 3-4 inch, in a spreading panicle, very slender; bracts very short. Male flower

$\frac{1}{80}$ inch diameter, pedicels capillary $\frac{1}{16}$ inch; stamens 8, included.

Female flower subsessile; style very short; stigmas revolute. Fruit

$\frac{1}{3}$ - $\frac{1}{2}$ inch diameter, globose.