Saxifragaceae A. L. de Jussieu
(Saxifrage Family)

Herbs; vessel elements with simple perforations; often with tannins, sometimes cyanogenic. Hairs often simple. Leaves usually alternate, sometimes in a basal rosette, simple to pinnately or palmately compound, entire to serrate or dentate, with venation pinnate to palmate; stipules lacking or represented by expanded margins of the petiole base. Inflorescences determinate to indeterminate, usually terminal. *Flowers* bisexual to unisexual (plants then monoecious to ± dioecious), radial to bilateral, *with a variously developed hypanthium.* Sepals usually 4 or 5, distinct to connate. *Petals usually 4 or 5, distinct, often clawed,* sometimes variously dissected, imbricate or convolute, sometimes reduced or lacking. Stamens usually 3-10; pollen grains usually tricolpate or tricolporate. *Carpels 2* (-5), ± connate or less commonly distinct; *ovary superior to inferior,* with axile or parietal placentation; stigmas separate, capitate. Ovules usually numerous on each placenta, with 1 or 2 integuments. Nectar disk often present around base of ovary. *Fruit a septicidal capsule or follicle* (Figure 8.52).

Floral formula:
, (4–5), 4–5, 5–10, (2–5); capsule, follicles

Distribution and ecology: Widely distributed in temperate and arctic regions, especially of the Northern Hemisphere, and often in mountainous terrain.

Genera/species: 30/550. ***Major genera:*** *Saxifraga (*325 spp.*), Heuchera (*55*), Chrysosplenium* (55*), Mitella* (20), and *Astilbe (20).* In addition to the above listed genera, noteworthy genera in the colder regions of the continental United States and Canada include *Boykinia, Leptarrhena, Sullivantia, Tellima, Tolmiea,* and *Tiarella.*

Economic plants and products: *Saxifraga, Astilbe,* and a few other genera are cultivated in rock gardens or perennial borders.

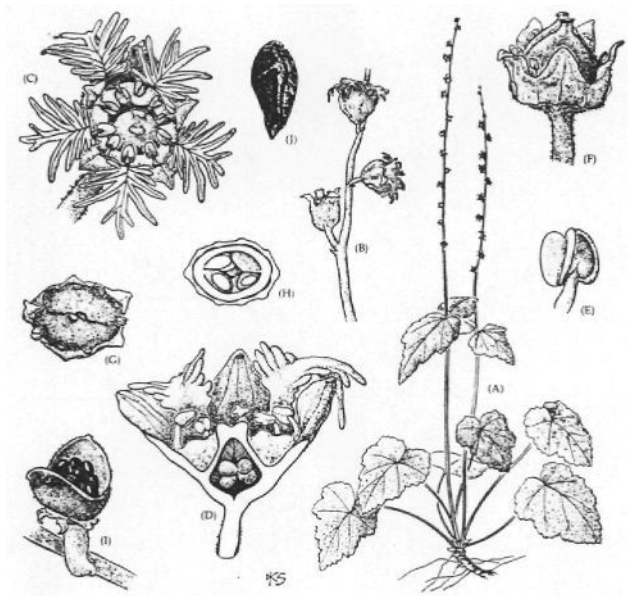

Figure 8.52 Saxifragaceae. *Mitella diphylla:* (A) flowering plant (x 0.75); (B) detail of raceme (x 4); (C) flower (x 15); (D) flower in longitudinal section (x 17); (E) dehisced anther (x 35); (F) immature capsule (x 9); (G) top view of immature capsule (x 9) (H) floral cup and capsule in cross-section (x 9); (I) erect "splash cup" capsule after dehiscence (x9); (J) seed (x 17). (From Sponberg *1972, J.Arnold Arbor.* 53: p. 426.)