CAMPANULACEAE 512

Changed *Asyneuma* to *Smithiastrum* in key to genera, *Melanocalyx* segregated from *Campanula* and added to key to genera, per Morin, N.R. 2020. Taxonomic changes in North American Campanuloideae (Campanulaceae). Phytoneuron 2020-49: 1–46.

## **CAMPANULACEAE** Harebell Family

Infl spicate, racemose, cymose, pan, corymbose, capitate, or fls solitary; fls  $\mathcal{Q}$ , fused at base, hypan gen present; calyx 5-lobed; corolla radially or bilaterally symmetric, resupinate in some taxa, lobes 5, gen free; stamens 5, filaments and/or anthers sometimes fused into tube surrounding style; style 1, 2–5-lobed; ovary inferior to 1/2 inferior, rarely superior (*Nemacladus*); fr gen a caps, sometimes a berry, placentation axile or parietal, opening by valves or pores; seeds  $\infty$ ; ann, bien, or per herbs, shrubs, or trees; lvs basal and cauline, cauline lvs alt, gen simple, sessile or petiolate; sts and lvs often with milky sap. *Phyteuma scorzonerifolium* Vill. coll once (2012) in King Co, WA; *Gadellia lactiflora* (M. Bieb.) Shulkina coll in Vancouver, BC, but not naturalizing.



1a Fls bilaterally symmetric, sometimes bilabiate; filaments fused, at least in part

2a Filaments fused above middle only, anthers not fused

2b Filaments from base and forming a tube, anthers fused

3a Fls sessile in axils of bracts, but appearing ped due to long, narrow hypan; lvs lanceolate to awl-like **Downingia** 

**3b** Fls ped; lvs various

**4a** Corolla  $\leq$  3 mm, occ absent; lvs linear to filiform; pls aquatic

4b Corolla gen 7-20 mm; pls aquatic or terrestrial

5a Corolla tube cleft at least halfway to base on upper side (between 2 lobes of upper lip), >> deeper than lateral clefts; corolla lobes white to blue to purple, contrasting throat color present or not; frs fusiform to ellipsoid or globs:

**5b** Corolla tube not deeply cleft on upper side, ca = lateral clefts; corolla lobes blue with yellow spot on lower lip; frs narrowly obconic to cylindric

Porterella

Nemacladus

Howellia

1b Fls radially symmetric, occ somewhat bilaterally so but never bilabiate; filaments not fused

6a Infl terminal, many-fld, densely capitate

Jasione

 ${\bf 6a}$  Infl a solitary, terminal fl or racemiform

7a Pls bien or per

8a Infl with 2-4 fls per node

Smithiastrum

8b Infl with 1 fl per node

9a Caps 12–20 mm long, elongate, obovate to clavate, tapering gradually to base, hypan gen long-hairy Melanocalyx

**9b** Caps < 12 mm long, hypan glab or scab to hairy

Campanula

7b Pls ann

10a Fls mostly terminal (may appear otherwise because of st br), sessile or not, bracts gen not lflike; base of filaments sometimes sparsely ciliate; caps opening by pores within calyx where style falls off
Githopsis

10b Fls axillary, sessile in lflike bracts; base of filaments ciliate; caps dehiscent outside of calyx

11a Corolla 3–5 mm, cylindric, lobes < tube; sepals widely triangular, lflike; caps open near base

Heterocodon

**11b** Corolla 5–10 mm, rotate, lobes > tube; sepals narrowly triangular, not lflike; caps opening in distal 1/2 **Triodanis** 

