Pediocactus simpsonii seedlings in Ontario, Canada

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An interesting report on the trials and tribulations of a hardy cactus species in Ontario, Canada. Photos as indicated.

Winters are cold in central Ontario, Canada, with early morning temperatures usually dipping below -30°C for about a week each year. Yet somehow, between us, we are foolish enough to grow about 50 species of cacti outdoors year-round, along with a few species of *Yucca* and *Agave*.

In March 2022, one of us germinated a single seed of *Pediocactus simpsonii*, with the descriptor 'snowball', supposedly originating from approximately 2,050m (6,700ft) elevation from Jefferson County, Colorado, which is just west (uphill) of Denver.

For its first winter, the seedling stayed indoors. We placed it in the outdoor garden in spring 2023, which in Ontario means late May. This seedling has a stem plus hypocotyl that are at least 15mm long, now happily ensconced underground (Fig. 1). The above ground part is roughly spherical and 2–3mm diameter, and the outdoor garden in which it grows is mostly composed of 1cm gravel for both drainage and top dressing, with the hope that the gravel might help prop up this etiolated seedling. It has now survived two successive winters outdoors. The photographed plant looks taller than it is wide because we removed some small pieces of gravel to photograph the plant.

The white 'boulders' in Fig. 1 are 10mm gravel, which dwarf the seedling. It might be another decade or more before this plant reaches flowering size. Each spring, Root has a difficult time finding this plant because even a small movement of one little piece of gravel, which invariably happens every winter, makes tiny seedlings hard to find. And there are plenty of animals that move the gravel around in winter, including red squirrels, field mice, deer, coyotes, porcupines, mink, stoats and river otters. We look forward to the year when we no longer need to find this charming plant again every spring. This year, we did not find the seedling until 25 June 2025.

We love that a selection of *Pediocactus simpsonii* called 'snowball' can be grown in Canada in a place in which the ground is covered by snow for at least four months and often five months a year (Gorelick, 2019). Independently, both of us have grown this cultivar, although Anna's specimens recently passed away.

The only seed-grown cacti that get big in Root's garden are various species of *Echinocereus*, and these end up looking like specimens photographed in habitat in New Mexico and Arizona, including in the warmer

► **Fig. 1 *Pediocactus simpsonii* 'snowball' 3-year-old seedling (Photo: Root Gorelick)**

▲ Fig. 2 *Pediocactus simpsonii*, 12-year-old seed-grown plant (Photo: Anna Mizyn)

southern parts of both states. That said, his cultivated cacti grow more slowly than those in habitat because the growing season is short in the far north.

Like most cacti that Root has grown outdoors in Canada, specimens of *Pediocactus* become increasingly compact over time compared with cuttings grown farther south (Gorelick & Gorelick, 2021). A similar phenomenon was noted by Del Weniger (1969), comparing reciprocal transplants of *Echinocereus triglochidiatus* and *E. coccineus* between southern New Mexico, northern New Mexico, and southern Colorado. But there is hope for the little seedling in Fig. 1. Anna, who owns and runs Anna's Perennials about 100km drive from Root, but only 50km as the crow flies, grew *Pediocactus simpsonii* from seed about thirty years ago and now has large plants that have flowered at least since 2012 (Fig. 2) and continue flowering every subsequent spring (Fig. 3). Like its close relative, *Pediocactus knowltonii*, *P. simpsonii* sets visible flower buds in autumn, which then open very early the following spring.

LITERATURE:
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Weniger, D (1969) *Cacti of the southwest: Texas, New Mexico, Oklahoma, Arkansas, and Louisiana*. University of Texas Press, Austin.

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▲ Fig. 3 Some of the same plants seen in Fig. 2, but 13 years later (Photo: Anna Mizyn)