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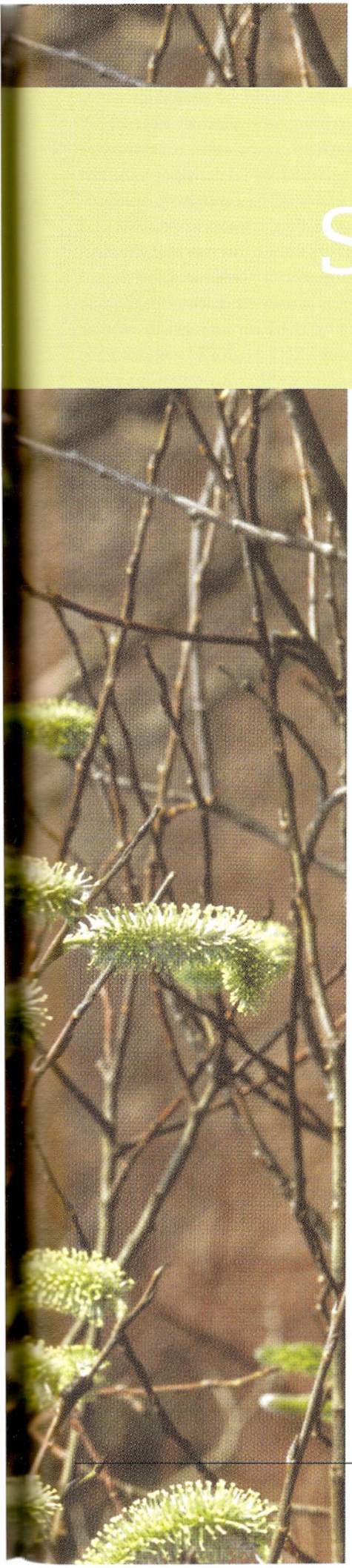

Collecting and processing Salicaceae seeds

| Bernard I Daigle and J Dale Simpson

ABSTRACT

In this article we discuss methods for obtaining quality seeds of Salicaceae species. Proper timing of collection and handling of the catkins are the critical first steps. We also describe a simple forced-air, rotating drum to open the capsules and separate seeds from tufts.

Daigle BI, Simpson JD. 2009. Collecting and processing Salicaceae seeds. Native Plants Journal 10(1):48–51.

KEY WORDS

Salix, *Populus*, seed capsules, collection, catkins, relative humidity

NOMENCLATURE

USDA NRCS (2008)

Salix spp. (willows) and *Populus* spp. (aspens, cottonwoods, and poplars) (Salicaceae) seeds are very small (1 to 3 mm [0.04 to 0.12 in] long). They are short-lived in nature and must germinate shortly after dispersal. The seeds are borne in catkins, which change color from green to a light yellowish brown as they dry and mature. This drying causes the individual capsules on the catkins to split open, thus releasing the mature seeds, which are attached to a tuft of cotton that enables them to be transported long distances by wind or water. Seeds must land on a suitable microsite within a few days or die.

Timing of collection is probably the most important factor to ensure quality seeds. The window of opportunity for gathering is narrow: seeds collected early are immature (Figure 1A) and will yield poor germination, whereas seeds collected late will result in low yields as most of the seeds will have already dehisced from the capsules (Figure 1B). The optimum time is just after the capsules have begun to open. Seed maturity can also be determined by examining seeds. The seedcoats of mature seeds are firm, while immature seeds have seedcoats that are soft and easily depressed. Seed color can also be used to determine maturity. Immature *Populus* seeds are a light tan color, and this color darkens as the seeds mature. Immature *Salix* seeds are greenish and sometimes translucent, turning a dark charcoal, almost black, color when mature.

Beaked willow (*Salix bebbiana* Sarg.). Photo by Joseph G Strauch Jr