

by Robyn Cobb and  
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# Partnerships for Plant Conservation in Texas

**Johnston's frankenia is a long-lived perennial endemic to three counties in western south Texas and three states of northeastern Mexico. In 1984, when the Fish and Wildlife Service listed this plant as endangered, only five populations were documented in the U.S. and one in Mexico, with the total number of plants estimated at 1,500. Because the species was known only from privately owned lands, much of the potential habitat in Texas and Mexico had never been surveyed.**

**This plant grows in areas where soils are extremely salty, a characteristic that evidently gives it a competitive edge. Analyses of soils from within a number of frankenia sites showed salinity and sodium content that was approximately 10 times greater than that found in other soils in the area. Physiological adaptations, including the ability to extrude salt, allow frankenia's persistence in these hypersaline conditions and limits the encroachment of many other plants, including invasive, introduced grasses that are commonly planted in that region.**

*F*or some endangered or threatened plant species, research into their distribution, abundance, and basic life history is the first step in developing a recovery plan. Sometimes this data collection process leads to the establishment of long-term, beneficial relationships between agencies and other partners, including private landowners. Such was the case for the Johnston's frankenia (*Frankenia johnstonii*), a semi-woody perennial of southern Texas and northern Mexico that is currently listed as endangered. Partnerships targeting conservation of the frankenia have also proved helpful in efforts to locate and study other rare plants of the south Texas brushland.

The frankenia's recovery plan calls for studies to fill information gaps about habitat requirements, population biology, and ecology, and for status surveys to determine abundance and distribution. The potential threats listed in the recovery plan, including the effects of habitat modification and destruction, heavy grazing, and introduction of nonnative, invasive forage grasses, needed more quantification as well. In response to interest from landowners and the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS), the Texas Parks and Wildlife Department (TPWD) undertook a study of this plant. The objectives included developing landowner confidence; quantifying habitat, plant abundance, and distribution; determining flowering cycles and fecundity; and examining historical land use practices. Using funding provided by the Service, TPWD partnered with Texas State University (TSU) to address these issues.

Co-author Gena Janssen, then a botanist working for the TPWD, began this project in 1993. Much of her early work involved reaching out to landowners, trying to earn their trust and gain access to the then undocumented frankenia populations. She used endangered species displays at community events like the Zapata County Fair, helped host a conservation summer camp for kids, and organized landowner meetings to discuss endangered species issues in Webb, Zapata, and Starr counties. To accomplish the extensive population surveys needed to determine the frankenia's distribution and abundance, Janssen had to identify landownership and get written permission to access land and collect data. This involved visiting with landowners, their neighbors, and other long-time residents, as well as developing a close working relationship with the NRCS and the county Soil and Water Board members. Outreach and persistence paid off. The gates literally began to open and the number of verified frankenia populations grew. Once access was granted, Janssen set about mapping populations, counting and/or estimating individual plant numbers, and other field studies.

The Endangered Species Act protects endangered plants on private land only if they could be jeopardized by federally funded or permitted activities. This raised the question of whether the frankenia, or any other plant that exists in large part on private land, could ever be delisted if it could be legally destroyed at any time. Since many of the ranchers that Janssen met promised her that they would not destroy the endangered plants on their land, she struggled to come up with a mechanism

to demonstrate this commitment to the conservation community. A conservation agreement seemed a plausible solution. In the mid-1990s, conservation agreements were beginning to be used under the Act, but only between federal agencies and usually for listing candidates. In 1995, a landowner meeting was held to discuss the concept of a voluntary conservation agreement. At the end of the meeting, Janssen asked, "So, do you want to do it?" After a lengthy silence, one landowner finally said, "I'll do it." With that, the others in the room said, "Well, okay, but we need to see this thing in writing!"

That was almost 10 years and more than 10 conservation agreements ago. Today, there are 58 verified Johnston's frankenia populations in south Texas, and 19 of the largest ones are being protected voluntarily by private landowners. So, do voluntary conservation agreements work? For Johnston's frankenia, the answer has been yes. Since these agreements have been in place no population sites have been destroyed. One potential complication is the fact that some landowners do not own the subsurface oil and gas rights. So far, however, the ranchers have been keeping gas drilling companies on their toes and off of the endangered plants. One rancher actually got a gas company to transplant 20 plants as a new gas well was drilled. Another rancher told a gas company that it would have to choose a different site for a new well because he had signed an agreement to protect his endangered plants. When the gas company was reluctant to make the change, the landowner told it to call TPWD, but the company got the message and agreed to move the well.

As a result of this progress, the Service proposed on May 22, 2003, to remove Johnston's frankenia from the list of threatened and endangered species. Developing working relationships with private landowners has not always been easy, but the benefits have extended far beyond the frankenia delisting proposal. For example, extensive surveys on private

ranches also revealed seven new populations of the endangered ash dogweed (*Thymophylla tephroleuca*) and allowed for scientific studies (again by the team of TPWD and TSU) of that species as well. Probably the most valuable aspect of this intensive outreach has been the newfound understanding and trust among landowners, conservation biologists, and government agencies. Not only are the populations covered under voluntary conservation agreements being preserved, but even sites not covered under signed agreements remain intact. Although some landowners opted not to sign agreements, they did give their word that they would do their best to take care of their population sites. In the end, it may be the reinforcement and recognition of successful stewardship that actually makes this conservation partnership work. Today, when Janssen calls for permission for a site visit, the response she gets is, "Sure, come on out! And bring the family!"

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**The tolerance of Johnston's frankenia for hypersaline soils gives it an advantage against encroaching vegetation and makes it easy to spot the plants in these photos.**

*Photos courtesy Robyn Cobb*