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### Cover

Sinking of a 16th century Basque galleon depicted by Ottawa artist Aili Kurtis. Photogrammetry is aiding in the reconstruction of the oldest shipwreck to be excavated in Canada. Map insert shows area of discovery marked with an "x" (see story page 4).



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## Fiddlehead farming

In 1783, when the United Empire Loyalists moved into New Brunswick, they were poorly prepared for the harsh winter that followed. Their survival depended on following the dietary example of their new neighbours, the Malecite Indians. So fiddleheads, the tightly coiled fronds of the ostrich fern that push through the moist forest soil in the early spring, became part of their diet. Although fiddleheads are now a gourmet's delight, they have more going for them than their unusual delicate flavour. Their protein and mineral content also make them top-quality nutrition.

All ferns produce fiddleheads, but it is the ostrich fern whose plume-like vegetative fronds emerge from the soil in spring as edible fiddleheads. According to Dr. Patrick von Aderkas, visiting scientist at NRC's Atlantic Research Laboratory in Halifax, the annual harvesting of about 250 000 kg contributes around \$600 000 to the New Brunswick economy per year. Most of this harvested amount is marketed fresh locally, but a small proportion is frozen to be sold across Canada. Dr. von Aderkas and other members of the Atlantic Fiddlehead Research Organization (AFRO) believe that fiddleheads could become a major crop and that the only limit to the market is labour. Until recently, members of the New Brunswick Association of Métis and Non-Status Indians were almost the only people in Canada to harvest fiddleheads for the commercial market. The total fiddlehead harvest comes from only 300 ha in New Brunswick.

From a completed survey of ostrich ferns in Nova Scotia, Dr. von Aderkas knows that the ferns grow in many different habitats; they don't necessarily require a damp forest to thrive. Some strains will grow quite nicely in drier, more exposed conditions, such as those found in a farmer's field.

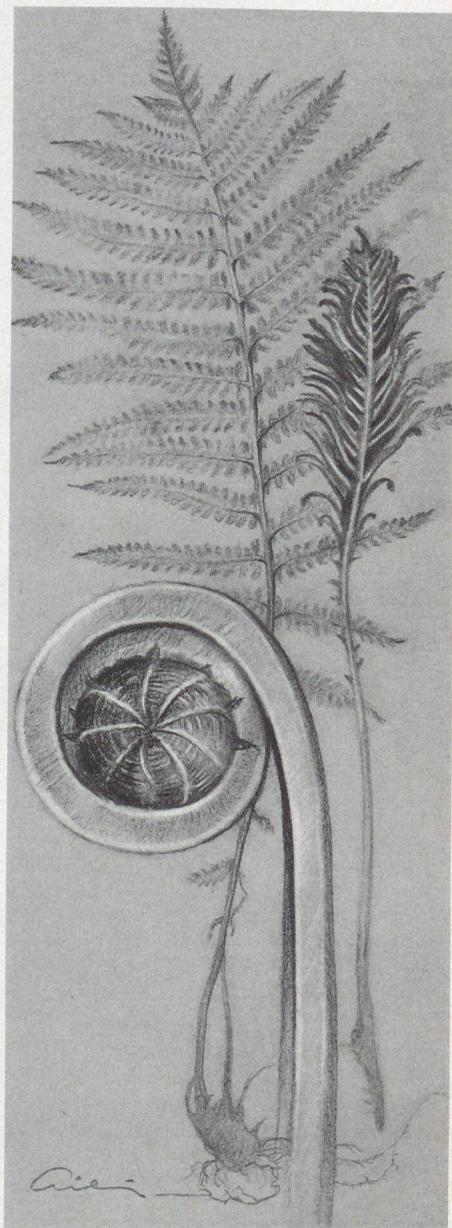
Fern maturation is a problem in laboratory studies. It takes three years for the fern to go from spore to small plant, a long time to wait for study material. Dr. von Aderkas is studying the maturation period under controlled laboratory conditions, trying to determine ways to shorten it to facilitate other studies of the ferns.

The potential fern farmer may have to wait a while initially, as it takes a total of five years for the fern to grow from a spore to a plant large enough that it is not killed when fiddleheads are removed. That's too long for the

farmer to wait for his crop to show a profit. If a suitable strain can be found, propagation of portions of the underground runner would yield whole plants in the same manner now used for potatoes.

Hopefully it won't be too many years before New Zealand Spring lamb just won't taste right unless it is served with Atlantic fiddleheads. □

Margaret Shibley Simmons



(Aili Kurtis)