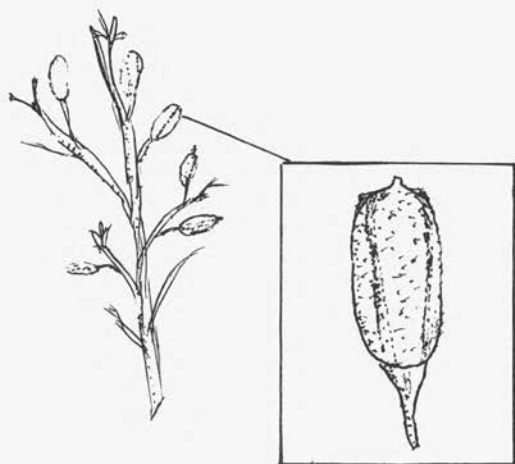


PINE GROSBEAKS EATING *ELAEAGNUS UMBELLATA* SEEDS

by Alan E. Strauss

During the winter of 1997-1998, there were large flocks of winter finches throughout New England, including the southern states of Massachusetts, Rhode Island, and Connecticut. This "invasion" made it possible to study some of these irruptive migrants as they fed on various trees, shrubs, and other plants. On January 3, 1998, I had the opportunity to watch twelve Pine Grosbeaks (*Pinicola enucleator*) as they fed along Kelton Road in Gardner, Massachusetts. I saw few birds feeding at the tops of maple trees, eating buds. This is apparently a favorite food source for Pine Grosbeaks. A few birds were also seen feeding on old apples remaining on trees in one of the yards along this street. This is also apparently typical of Pine Grosbeaks, which are said to especially favor crab apples, mountain ash, pine seeds, and maple buds (Ehrlich et al. 1988), and I have seen Bohemian Waxwings (*Bombycilla garrulus*) and Pine Grosbeaks feeding on apples in orchards in Maine in past years.

Most interesting, however, was that Pine Grosbeaks were also feeding in some low bushes close to Route 140. I watched carefully and noticed that the



Enlarged Detail

Elaeagnus umbellata, shown slightly smaller than actual size, with enlarged detail.

birds were feeding on some type of small, grayish to reddish seeds. The seeds were attached to the branches of the shrubs by small, woody stems. There were hundreds of seeds on the shrubs, and many more were lying on the snow beneath where the grosbeaks were feeding.

I collected some of the seeds and twigs for identification. In addition, Tom Pirro, a resident of the Gardner area, was kind enough to mail me some additional samples. I also took several photographs of

the Pine Grosbeaks as they fed in the shrubs at eye level.

I sent the seeds, twigs, and photographs to Dr. Ed Cope at the Bailey Hortorium at Cornell University for identification. Dr. Cope identified the seeds as those of autumn olive or autumn elaeagnus, known botanically as *Elaeagnus*

umbellata. This plant is not native to New England but is an introduced species originally from southeast Asia (E. Cope, pers. comm.) I did some further research to find out more about the autumn olive plant. It was introduced into the United States in 1830 from China, Japan, and Korea. autumn olive produces small (less than a quarter-inch long), fleshy fruits that range in color from pink to red. A single shrub can produce up to eight pounds of fruit (Szafoni 1989). Each fruit contains one soft, ridged pit.

These trees are commonly planted along highways as screens, and to stabilize and revegetate road banks. They are known to attract birds and wildlife. Each tree, which can reach a height of about twenty feet, can produce 20,000 to 50,000 seeds per year, and the seeds are widely distributed by birds.

It is interesting to note that birds such as Pine Grosbeaks, from northern New England and Canada, were feeding on introduced plants. There were also Evening Grosbeaks (*Hesperiphona vespertina*) feeding on these same plants. This suggests that these winter finches are generalists in terms of their diet, meaning that they eat any type of seeds or fruits available within the areas that they migrate to. It is unclear to me whether autumn olives are growing in Maine, Vermont, New Hampshire, and Canada, and how long these birds have been feeding on this Asian plant. It would be interesting to determine whether Pine Grosbeaks have been feeding on autumn olive on their breeding grounds, or whether this is a food source used only during their winter wanderings. Perhaps this is a food source that was only utilized this year? There are many interesting and unanswered questions related to my observations on the feeding behavior of last winter's Pine Grosbeak flocks. I would welcome any data that other observers may have on this subject.

References

- Ehrlich, P.R., D. Dobkin, and D. Wheye. 1988. *The Birder's Handbook: A Field Guide to the Natural History of North American Birds*. New York: Simon and Schuster.
- Szafoni, B. 1989. *Elaeagnus Umbellata*. Illinois Nature Preservation Commission, Department of Conservation.

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