$30 was incurred for stump removal and $125 for replacement and maintenance of a new tree, bringing the total average cost of $345 per diseased elm. If approximately 62 percent of the pruned elms can be saved, a saving in maintenance costs will be realized which will more than justify the recommendation of an intensive scouting and pruning program. The saving in aesthetic value of a large tree versus that of a small replacement tree must also be considered.

Literature Cited

1. Brown, M.F., R.J. Campana, and M.A. Rosinski. 1963. *Downward movement of conidia of Ceratocystic ulmi from terminal twigs of elm.* Phytopathology 53: 871. (Abstr.)
2. Campana, Richard J. 1975. *Tracing Dutch elm disease infections for depth of infection following excision of infected branches.* Proceedings of the American Phytopathological Society 2: 95. (Abstr.)
3. Hart, J.H. 1970. *Attempts to control Dutch elm disease by pruning.* Plant Disease Reporter 54: 985-986.
4. Hart, John H. and W. Donald Landis. 1971. *Rate and extent of colonization of naturally and artificially inoculated American elms by Ceratocystis ulmi.* Phytopathology 61: 1456-1458.
5. Marsden, D.H. 1952. *Pruning elms affected with Dutch elm disease.* Phytopathology 42: 113-114. (Abstr.)
6. May, C. and W.R. Douglas. 1944. *Some factors affecting the value of pruning for Dutch elm disease.* Arborist's News 9: 33-35.
7. Neely, Dan. 1968. *Twig inoculations on American elm with Ceratocystic ulmi.* Phytopathology 58: 1566-1570.
8. Needy, D. 1970. *Dutch elm disease symptom progression.* Plant Disease Reporter: 54: 127-129.
9. Neely, Dan. 1972. *Progression of internal and external Dutch elm disease symptoms.* Plant Disease Reporter 67: 667-671.
10. Pomerleau, Rene. 1968. *Progression et localisation de l'infection par le Ceratocystic ulmi dans l'orme d'Amerique.* Phytopathologisch Zeitschrift 63: 301-327.

ABSTRACTS

Roberts, B.R. and A.M. Townsend. 1975. **What roles do trees play in cleansing the air?** Weeds, Trees and Turf 14(7):38-39.

One detrimental side-effect of the increasing energy demand in this country is the possibility of higher levels of air pollution. With more and more industries converting to coal as an alternative source of energy, the concentration of certain atmospheric pollutants, particularly sulfur dioxide (SO_2), will increase proportionately. Thus, despite our efforts now and in the future, a certain degree of air pollution is inevitable. The problem then becomes one of maintaining pollution at some acceptable level. This can be accomplished in two ways: (1) by controlling the source of pollution through proper legislation and surveillance; and (2) by maintaining an adequate and effective reservoir for existing pollutants.

Furniss, M.M. and W.F. Barr. 1975. **Insects affecting important native shrubs of the northwestern United States.** Forest Service General Technical Report INT-19. Intermountain Forest and Range Experiment Station, Ogden, Utah. 64p.

Information is presented on insects and mites associated with important shrubs native to the Pacific Northwest. Forty-three insect species or insect groups and one mite species are discussed with emphasis placed on their geographic range, hosts, type of damage, appearance and habits, life cycle, and natural control. The orders of insects and mites represented are Coleoptera (beetles), Diptera (flies), Hemiptera (true bugs), Hymenoptera (ants), Lepidoptera (moths and butterflies), Thysanoptera (thrips), and Acarina (mites). A host plant index to the following genera is provided: *Acer, Alnus, Amelanchier, Arctostaphylos, Artemisia, Atriplex, Betula, Ceanothus, Cercocarpus, Chrysothamnus, Populus, Prunus, Purshia tridentata, Quercus, Ribes, Rosa, Salix, Sambucus, Symphoricarpus, Ulmus.*