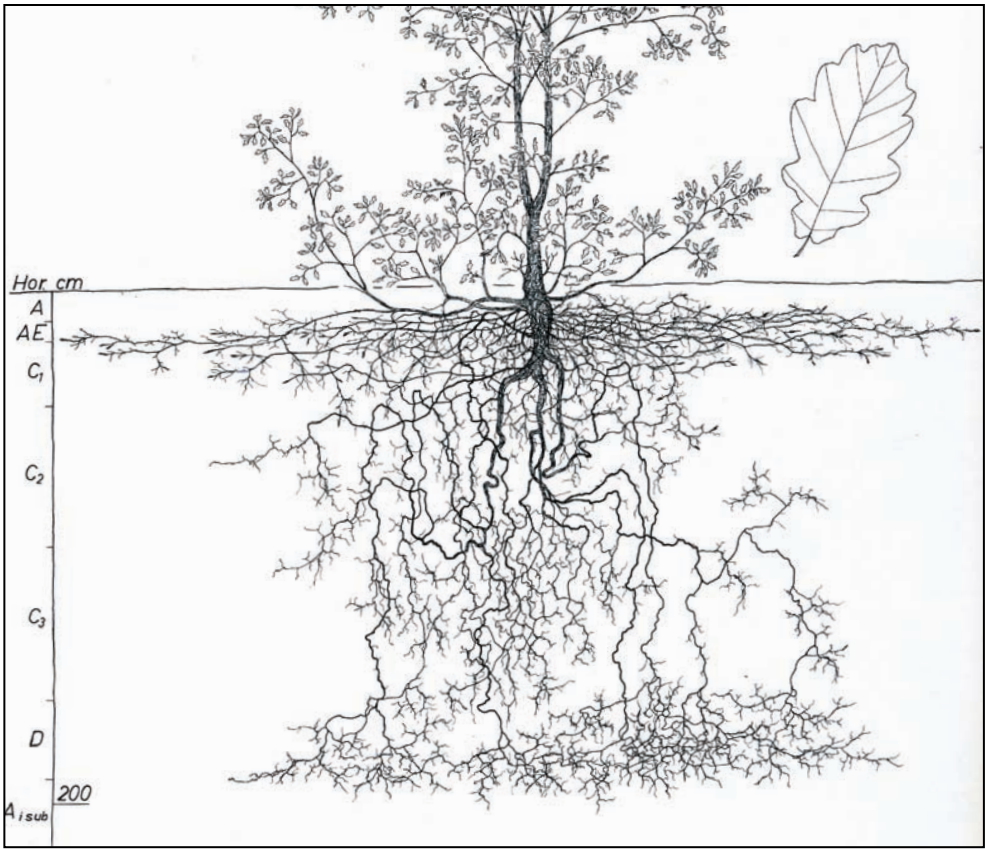

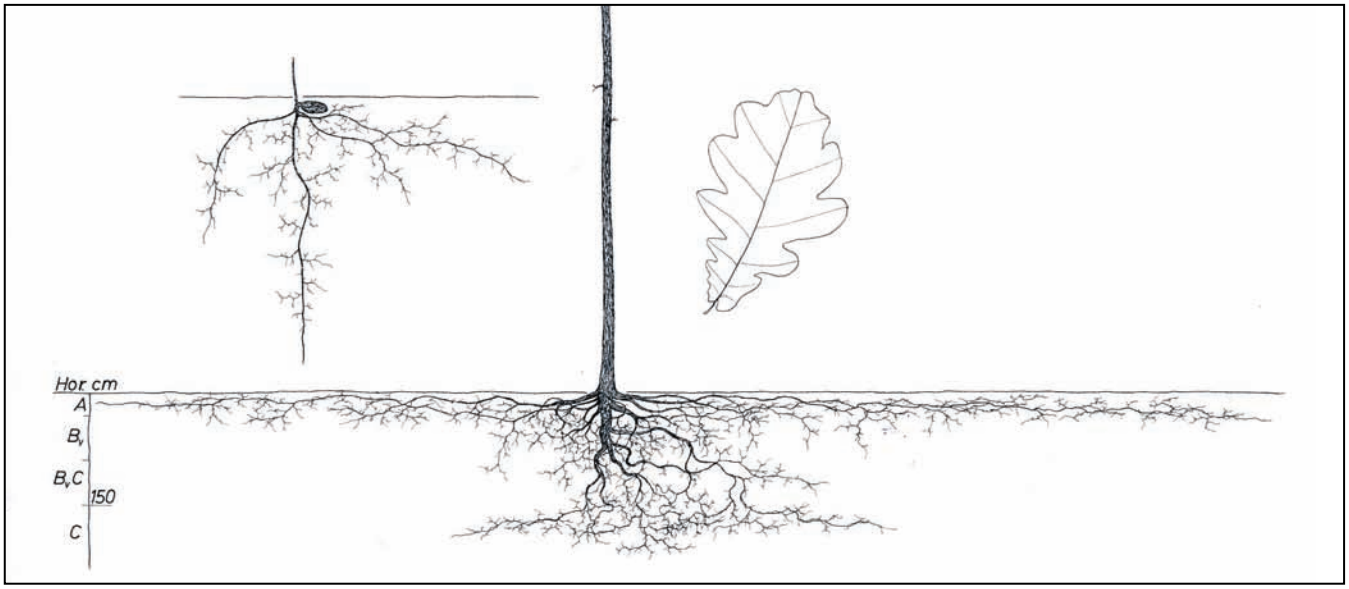

Figures 58 and 59: Two more *Quercus robur t*rees reveal how different root patterns can be. The upper tree has grown several taproots, as well as many smaller roots reaching down as far as 8 feet. The lower tree is the same species, but this one has mainly produced fibrous roots growing to a depth of 7 feet and 51 feet wide (the tree was 43 feet tall). Oaks, pines, nut trees, and certain other trees (like persimmons) usually grow taproots, but when the tree is dug for sale as a bare-root or balled-and-burlapped plant, the taproot is destroyed and does not regrow; only trees grown from seed produce a taproot. The seedling illustration here shows how a deep taproot quickly grows from an acorn, followed by fibrous lateral roots as the tree ages.

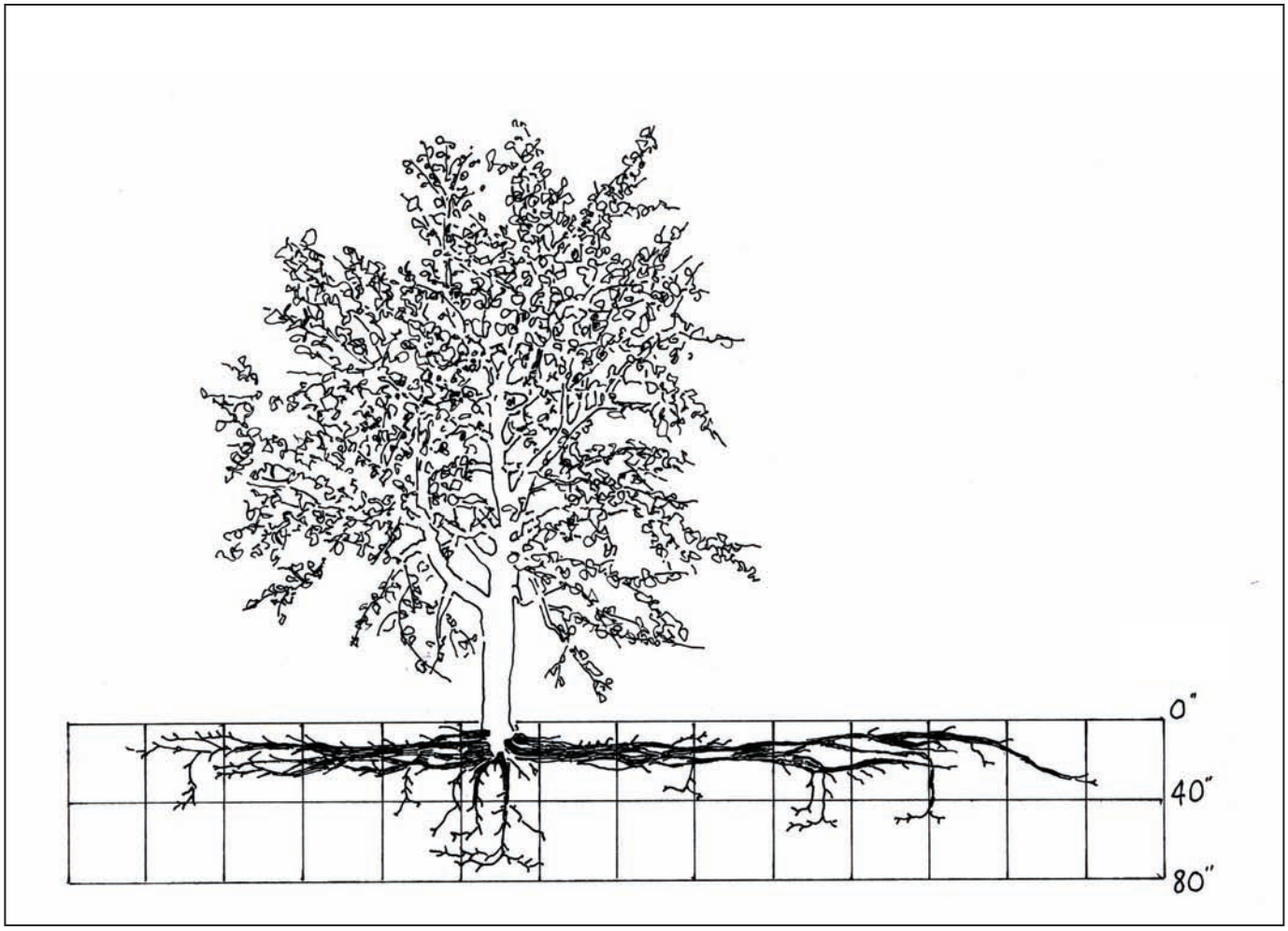

Figure 38: Here are fruit tree roots (thru Figure 47) based on an amazing book entitled: *Root Location of Fruit Trees and Its Agrotechnical Consequences* (1986) by Janos Tamási of Budapest, Hungary. These root drawings are far superior to any other fruit tree illustrations I've seen. To reveal and map the roots, Tamási used the same technique (appropriately called the "skeleton method") as Dr. Weaver. Each box in each drawing is one meter (*not* one foot) square.

Here's a 30-year-old apricot tree with roots growing to a depth of nearly 80 inches (about seven feet) in sandy soil. The roots on the right extend more than 39 feet beyond the dripline. According to Tamási, 82.5 percent of its roots are growing in the top eight to 24 inches of soil. (How's that for precision?) Although he doesn't say, I'm assuming that there are very few roots in the top eight inches of soil because the orchard was tilled to control weeds. There's also a reference to "green crop worked in." Green manuring (growing a crop and tilling it in to act as a mild fertilizer) will also destroy roots in the top eight inches (or more) of the soil.