REVIEWS

Les Peupliers Francais.—By Meunier, Guinier and Régnier. Published by Revue du Bois, Paris, 1947. pp. 35, plates 75, full page line drawings, etc. 8.

For those who have struggled for years to reconcile the characters that we find in locally cultivated poplars with what has been written on them on the other side of the world, it is heartending to find that the puzzlement and confusion is not wholly of our own making. "Nothing is more like one poplar than is another poplar" says this recent pamphlet published in Paris by the Revue du Bois: and it would seem that our local questionings and doubts are merely echoes of things that still exercise the minds of those who deal much more intensively with the genus than does the New Zealand forester. There has been an unusually large number of forestry papers published in the last two or three years dealing with poplars and poplar culture: and it would appear that a real and concerted effort is being made in Europe to rationalise the culture of this very useful and tractable genus. In 1947, an International Poplar week was held in Brussels, attended by delegates from France, Holland, Great Britain, Poland, Italy, Belgium. A complete account of it can be found in the Bulletin of the Central Forestry Society of Belgium for November, 1947: and details of the census of poplars that will be undertaken as a result of the findings of its International Committee will be found in the issue for March, 1948, of the same magazine. The immense confusion in nomenclature and the difficulty of identification are admitted: and a standard set of characters under nineteen headings has been drawn up for international use in description of specimens.

These are as follows:—

Character	Remarks.
1. Location.	References to enable the tree to be re-identified and re-examined.
2. Group.	e.g. Black Poplar or Balsam etc.
3. Latin Name and Authority.	e.g. *Populus marilandica* Bosc.
4. Latin Synonyms.	
5. Common Name.	
6. Sex.	
7. Date of Leaf Bursting.	
8. Date of Leaf Fall.	
9. Flowering.	For female trees state if seed is abundant; for other types, the same sex may give little or no seed.
10. Tree Habit.	Use terms spreading, erect, semi-fastigiate or fastigiate.
11. Trunk.	Classify as very straight, straight, more or less forked, forked.
12. Bark.	State (a) Whether it fissures in youth or later. (b) Colour of young bark. (c) Colour of fissured bark. (d) Thickness. (e) Shape of ribs or ridges.

Character.	Remarks.
13. Branching.	(a) Density—open or heavy. (b) Insertions pattern—more or less whorled or alternate. (c) Branch dimensions—thick or thin. (d) Cross section of vigorous shoots—winged, fluted or round. (e) Presence or absence of hairs on same shoots. (f) Colour of young branches when well ripened—deep brown to light grey. (g) Colour of young spring shoots—green or more or less red.
14. Leaves.	(a) General shape of blade—ovate, obovate, lanceolate, deltoid, orbicular, lobed or digitate. (b) Apex of leaf—sharp, pointed, round. (c) Base of leaf—straight, cuneate, cordate or rounded. (d) Colour of leaves at flourish—green or reddish. (e) Summer colour of leaf—both upper surface and lower suface—presence or absence of pubescence on lower. (f) Glands at base of blade near petiole. (g) Colour and pubescence of midrib—green, red, or partly red. (h) Petiole—long, short, round, flat, pubescent, glabrous, green or red. (i) Leaf buds—shape, viscosity, pubescence, appressed to stem or obliquely set.
15. Flowering.	(a) Catkins—colour (red or green), length, compact or lax. (b) Bracts—more or less laciniate, more or less ciliate. (In *white* poplars flower bracts are ciliate and persist throughout flowering : in *black* poplars they are not ciliate and they are shed during flowering). (c) Male flowers—number of stamens e.g. 5 to 10, 10/20, 20/30 or more than 30, colour of anthers. (d) Female flowers—number of stigmata—2, 3, or 4. (e) Floral buds—form and size (male buds are bigger than female).
16. Ripe fruit.	(a) Length of catkin. (b) Length of peduncle. (c) Date of ripening. (d) Number of valves in capsule—2, 3 or 4.
17. Miscellaneous Observations.	(a) Susceptibility to specified diseases. (b) Cultural demands. (c) Vigour of cuttings or of suckers, etc.
18. Any marked character of the tree.	
19. Similarity to any known poplar.	State also explicitly any characters which are dissimilar to that poplar.

This makes an exhaustive description in a standardised sequence such as has not before been attempted or found necessary for any other forest genus. If the international body can build up a body of good herbarium specimens documented fully in this fashion, much of the past confusion will be in time dispelled; but the mere fact that such extensive documentation is deemed still necessary indicates that the confusion still exists even in circles where the genus has been carefully studied for years.

Certain other resolutions which will be helpful were passed by the International Commission and should be observed by all foresters who are interested in clarifying the poplar question, e.g.

(1) Latin names are to be used only for species of which both male and female are known; and for hybrid names of long standing. New clones will be given local names, following the principle authorised by the Rules of Vienna for cultivated plants.

(2) The tree habit (see Item No. 10 in preceding table) is to be described for trees between the ages of 15 to 20 years. The reason given for this decision was that after this age, the characteristic silhouette appearance of any species is apt in cultivation to be distorted or obscured by pruning.

(3) The date to be recorded for leaf-burst (see Item 7 of preceding table) is to be taken as the date when the upper half of the branches have developed leaves to the length of 2 centimetres.

The other publication already quoted is fuller than the available accounts of the International Committee's findings. It sums these up and recapitulates many of them, but adds a long and useful chapter on the present opinions about the various woods. These opinions are, not unnaturally, as variable as the nomenclature: and, of course, the intensive utilisation practised with poplar woods in Europe calls for refinements and quality gradings unknown and unneeded here. It is stated, for instance, that even with the close attention that popular culture receives in France, the veneer logs both peeled and sliced there frequently have 50% of their volume rejected in the product. This quality defect is attributed largely to wrong varieties and bad treatment during growth. It is interesting, too, to find that the very species which are lauded by nurserymen and silviculturists tend to be the species of which the wood-user is most distrustful. This is particularly the case with the hybrid *P. robutsta* (a purely male hybrid originating from *P. plantierensis* male X *P. angulata* female).

The same qualities as have attracted New Zealand favour to this hybrid, viz. extreme straightness of trunk, wind and frost resistance, rapid early growth and absence of disease, have apparently attracted similar favourable attention from poplar growers in Europe. It is stated that during the past few years there has been a "veritable invasion of this poplar in many districts" in France. The growth results seem good: and numerous photographs match for tree shape the tree as we are coming to know it in New Zealand. The users of

poplar timber for special purposes are, however, less enthusiastic, and allege that the timber is brittle as compared with that of other species. As the hybrid is of comparatively recent origin, it is doubtful whether any timber over 25 years of age has found its way on to the market: and so there is equally some doubt whether this adverse opinion does not arise from the well known conservatism of users, and prejudice against a new product. There is, however, a general concensus of opinion among both growers and users that it gives a large volume of timber from very straight logs at an early age: and that, if stands are pruned, this timber is very clean and knot free. For the purposes for which poplar timber is at present used in New Zealand, this seems an adequate recommendation for the species here, where the fact that its timber tends to be "hard and stiff" as compared with that of some other less easily grown poplars would probably be of little moment.

The intense and renewed interest in poplars evidenced by these and other recent publications in Europe is explained in the Revue du Bois publication as a deliberate step in the various nations' attempts at forest rehabilitation after war damage. The destruction of available timber can most quickly be repaired by poplar culture, even though all other stands of war-destroyed timber are quickly replanted. It is stated that, even now, the consumption of poplar timber in log sizes exceeds 35 million cub. ft. per annum in France alone; and that smaller pulp wood sizes consume much more. The emphasis laid, therefore, on rapid extension of poplar stands for replenishment of war-damaged woods is readily understandable: and quite logically, it is argued that the way to achieve it is to understand the genus and select its best species or hybrids.

C.M.S.

Elementary Forest Mensuration.—By A. D. McKinnon. Published by the N.Z. State Forest Service, Wellington, 1947. 112 pp., 39 fig., paper covers. Price 6d.

Surely this must be the best value for sixpence put on to the book market for some time. In 112 pages McKinnon has combined the essentials of basic Mensuration with the particular requirements for conditions in New Zealand. The need for a book on this subject has long been felt, and in a condensed form the subject matter here has been expounded with clarity and common sense.

At first reading the book appears to be disjointed, and somewhat illogical in the sequence of chapters introduced, but on second thoughts the reason for this is apparent and entirely justified. McKinnon has departed from orthodox procedure and included in Chapter V an introduction to Elementary Forest Surveying which undoubtedly forms a desirable addition to a book of this kind. By this means