As the authors point out, the concept of estimating stand volume directly from the dimensions of the stand instead of the individual trees has been used in Europe for over a century. Yield tables also often include stand volume tables: for example, in the New Zealand Forest Service yield charts and tables for *Pinus radiata, Pinus nigra, Pinus ponderosa* and *Pseudotsuga taxifolia* (F.R.N. Vol 1 (10) and N.Z.F.R.N. No. 5), present and future volumes are estimated directly from the stand dimensions basal area and height.

The claim that stand volume can be estimated on plots in less than one per cent of the time taken by previous Australian volume table methods could be misleading to foresters who are unfamiliar with these procedures. Past Australian methods often required the measurement of d.b.h., total height, bark thickness at breast height, and taper between 5 and 15 ft. above ground, for every tree on a plot. The New Zealand Forest Service method of using two-dimensional volume tables takes little more time than the stand volume table method for conventional ground plots: the field work is the same for both, but the calculation for the volume table method does take about twice the time. However, the development of quick methods of measuring stand basal area from "angle-count" instruments should renew interest in stand volume tables of the kind described in this paper for ground assessments of growing stock.

G.D.

"PLANTATION INVENTORIES WITH AERIAL PHOTOGRAPHS AND ANGLE-COUNT SAMPLING." By D. A. N. Cromer and A. G. Brown. Forestry and Timber Bureau (Canberra) Bulletin No. 34.

The authors describe a test assessment of 8,000 acres of planted *Pinus radiata* forest in the Australian Capital Territory. In addition to examining several aspects of the use of aerial photographs and angle-count sampling, they discuss other related topics, in particular, the derivation of stand volume tables.

As a criteria for stratification, necessary because of appreciable climatic and topographic differences even over this small area, site index and crown density were chosen. The definitions of these factors and their relation to the photography are discussed. Basal area was obtained by the angle-count method using Cromer's Reflectorscope. The sampling intensity, depending on circumstances, was only one enumeration sweep per 10 or 15 acres. This seems very low although, as the authors imply, it may be quite adequate with the stratification used. Nevertheless, it is surprising that, in what is in general a paper which presents all the relevant or interesting data and uses statistical techniques, no attempt to estimate the sampling error under these circumstances has been included.

For the calculation of volume the mean tree method was used and is compared with the volume line method. It is pleasing to note that completely subjective selection of the mean trees was avoided by a method which, although allowing a certain element of subjectivity, should not result in any bias. It is also pleasing to note that only essential calculations were carried out in the field and all computing which affected the volume estimation was left to the office. Sample tree merchantable volumes were obtained from a multiple regression equation based on basal area over bark, total height and their product.

From the time point of view, the assessment must compare more than favourably with orthodox line strip methods, but one wonders what the increase in precision would be had the number of enumeration sweeps been doubled by making the sweeps in pairs, say, one chain apart, but with the same amount of recording of sample trees, etc. Obviously the increase in time should be negligible; with a suitable angle-count factor a sweep can be made within one or two minutes and far more time would be taken up in tree measuring and moving from plot to plot.

The data obtained were used to derive stand volume tables, the "Australian equation" being compared with the "combined variable equation". Other interesting items such as the reliability of photo interpreted heights and the difference between predominant height and height corresponding to mean stand diameter are given attention.

The paper therefore demonstrates the feasibility of assessment by aerial photography and angle-count sampling in planted coniferous forests. The advantages seemingly outweigh the disadvantages but one is left with the feeling that there are more ideas to be tried and that there is certainly room for greater publication of methods and ideas which have been used and have failed to give satisfactory results.

On the whole the paper is clearly written and contains sufficient detail for one not greatly familiar with either mensurational or statistical techniques but has not fallen into the pitfall of over-simplification. This, of course, tends to break the continuity but this is compensated for by clear and concise statements of purpose and results at both the beginning and end of the paper.

W.G.W.

INTERNATIONAL GLOSSARY OF TERMS USED IN WOOD ANATOMY. Prepared by Committee of Nomenclature, International Association of Wood Anatomists published in "Tropical Woods" No. 107, October 1957. Pages 36, Figures 1. Price to Members of the Association $0.15 ($0.20 covered); price to non-members $0.30 ($0.40 covered).

The English version is the fore-runner of a multi-lingual, illustrated glossary to be prepared by the Association. Urgency was accorded the version under review in order to meet the needs of the British