

## 6. A TRANSPORTABLE MAP CABINET FOR VEHICLE AND OFFICE USE

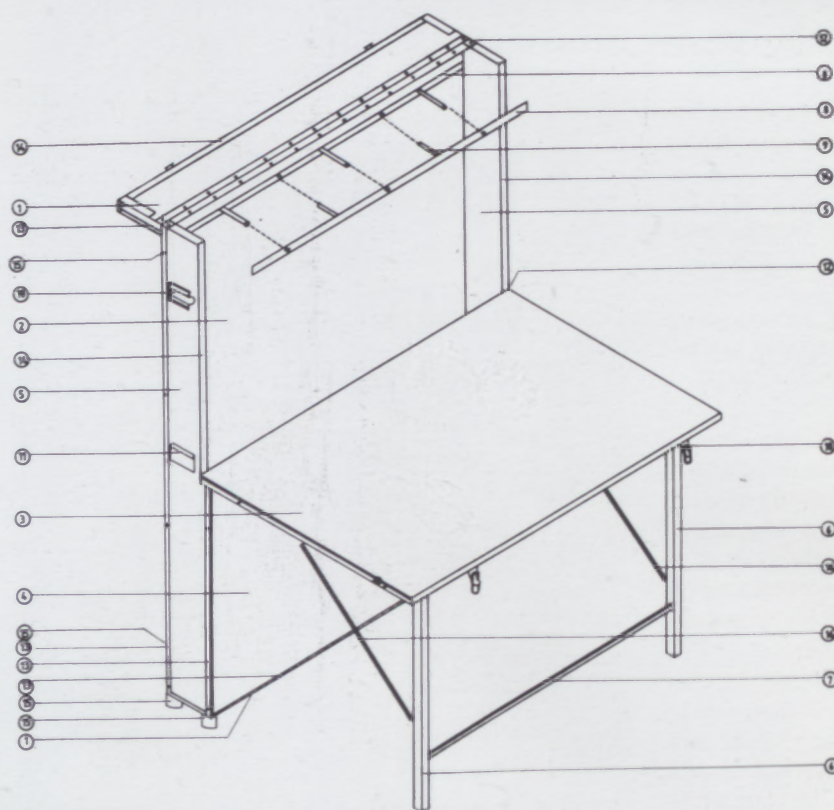
The simplest reference for collecting or sample site locality is the grid system of parallels and meridians, used throughout the world, and is the most common of co-ordinate systems (Strahler 1975). This grid system is also used on the South Africa 1:50 000 sheets which, because of scale convenience, are frequently used for determination of site locality.

The precision with which site localities are determined can influence 1, subsequent mapping precision; 2, re-collecting or re-sampling efficiency; 3, re-sampling validity; and 4, validity of correlations with other sources.

In field situations, it is often impracticable to determine positions on a map with greater precision than the nearest millimetre. This implies a ground error of less than, or equal to 25 m at 1:50 000 scale. It is, therefore, not

necessary under these circumstances, to record a locality with a precision greater than the nearest second, which implies a ground error of less than 16 m. This level of precision can be considered adequate for much plant collecting and vegetation sampling work. Fluctuating humidity with consequent stretch and shrinkage of maps should not significantly alter this level of precision because of proportionality. However, the method of map transportation, including folding, rolling and subjection to impacts can cause considerable map distortion, often with irregular loss of precision.

These causes of precision loss can be overcome with a vertical map filing cabinet. A multi-prong map-support system, for use with pre-punched tape on the maps, facilitates indexing, filing and retrieval. This system is used in the map cabinet shown in Figure 11. Maps are supported



### MATERIALS

| ITEM NO. | QUANTITY | DESCRIPTION                  | REMARKS                |
|----------|----------|------------------------------|------------------------|
| 1        | 1 each   | Top and base (blockboard)    | 940x125x16             |
| 2        | 1        | Back (plywood)               | 1205x940x3             |
| 3        | 1        | Working surface (blockboard) | 940x595x16             |
| 4        | 1        | Front (plywood)              | 940x605x3              |
| 5        | 2        | Sides (blockboard)           | 1205x125x16            |
| 6        | 2        | Legs (square tubing)         | 605x16x16              |
| 7        | 1        | Strut (square tubing)        | 760x12x12              |
| 8        | 2        | Flat iron                    | 890x25x6               |
| 9        | 5        | Metal prongs                 | Ø 7mm<br>80mm long     |
| 10       | 4        | Throw over catches           | 55mm long<br>15mm wide |
| 11       | 2        | Handles                      | 80mm long<br>35mm wide |
| 12       | 2        | Piano hinges                 | 940mm<br>30mm wide     |
| 13       |          | Aluminium corner strips      |                        |
| 14       |          | Sponge rubber strips         | 25mm wide              |
| 15       | 8        | Rubber door stops            | Ø 35mm                 |
| 16       | 2        | Chains                       | 480mm                  |

FIGURE 11. — Plan of portable map cabinet with list of materials required.



FIGURE 12.—Portable map cabinet in vehicle with front flap down to form a working surface. Note opissometer (a), attached with spring clips, for measuring distance.

by five metal prongs, three of which are attached to a fixed flat iron bar and two of which are attached to a removable bar for map retrieval. Holes drilled in the bars opposite each prong allow support for the removable bar and simplify map retrieval and filing. The removable bar is held in place by the front flap when in the closed position. The front flap also serves as a large working surface and is supported by fold-down legs when open.

The map cabinet has a net mass of about 20 kg and a capacity of over 100 maps. It can be carried by one person and is suitable for use in a vehicle such as is illustrated in Figure 12. Map storage and transport as well as site location and plotting in the field are greatly facilitated with the use of this map cabinet.

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#### REFERENCE

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