A MODIFIED CAMERA TRIPOD SUITABLE FOR PHOTOGRAPHING FUNGI AT GROUND LEVEL

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The series of articles by Gordon Dickson in *The Mycologist* has contained many useful tips to help all mycologists obtain high quality photographs of fungi. Yet one of the major difficulties recognized by Dickson (1987) is being able to get the camera close enough to the ground to capture some of their more important diagnostic features such as hymenial characteristics. Like him, we have failed to find a commercially available tripod with the adaptability, manoeuverability and appropriate weight which will work. The *Benbo* tripods he mentions are exorbitantly expensive in Australia, and well beyond the means of many persons. People we have spoken to, who use them, are normally too exhausted to take photographs after carting them through the bush. They also rapidly seem to develop the

Fig.1 Examples of photographs obtained with tripod. (a) *Cortinarius archeri;* (b) *Pleurotus nidiformis.* Kodachrome Print Film, 100 ASA, Pentax K1000 with 50 mm Macrolens, 1 sec exposure at F22.

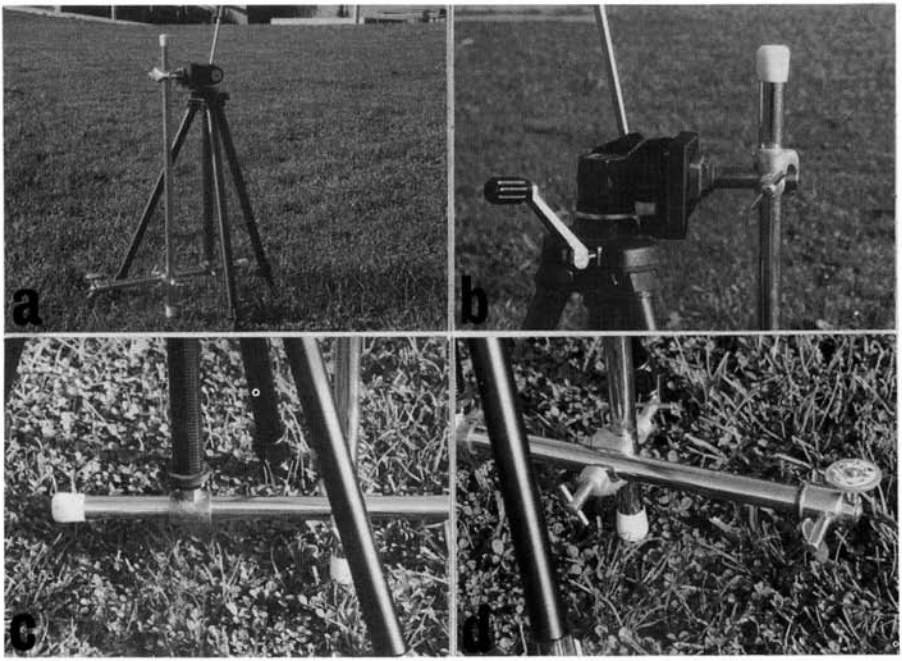

Fig. 2. Tripod adaptor for photographing fungi. (a) Tripod with adaptor attached; (b) attachment of adaptor to tilt-head plate; (c) attachment of adaptor to central stem; (d) ball-and-socket for camera attachment.

muscle tone of 'Superman'.

Our only alternative was to design and build one ourselves and, among several designs conceived and engineered by one of us (RGS), we think the solution we describe here will be of great benefit to people interested in improving their technique for photographing fungi. It is an adaptor for a tripod, and can be attached to any tripod with no stay supports across the frame legs, and which also has a thread for camera attachment at the base of the adjustable central stem. As this adaptor weighs less than 800 gm, the tripod with it attached is still light enough to carry comfortably. The assembly is also very stable so that camera vibration is no problem, and yet is flexible enough to photograph fungi at various heights down to ground level. This adaptor is also cheap and simple to manufacture with basic workshop facilities.

Essentially it consists of a rigid frame made of two appropriate lengths of $\frac{5}{8}$" chrome-plated steel rod which are attached to the tripod at two points, via extension bars from the tilt head plate at the top of the tripod and the base of the adjustable central stem as illustrated in Fig. 2a. In both cases, these extension bars are joined to the tripod via correct screw threads (ie standard $\frac{1}{4}$" Whitworth threads), as

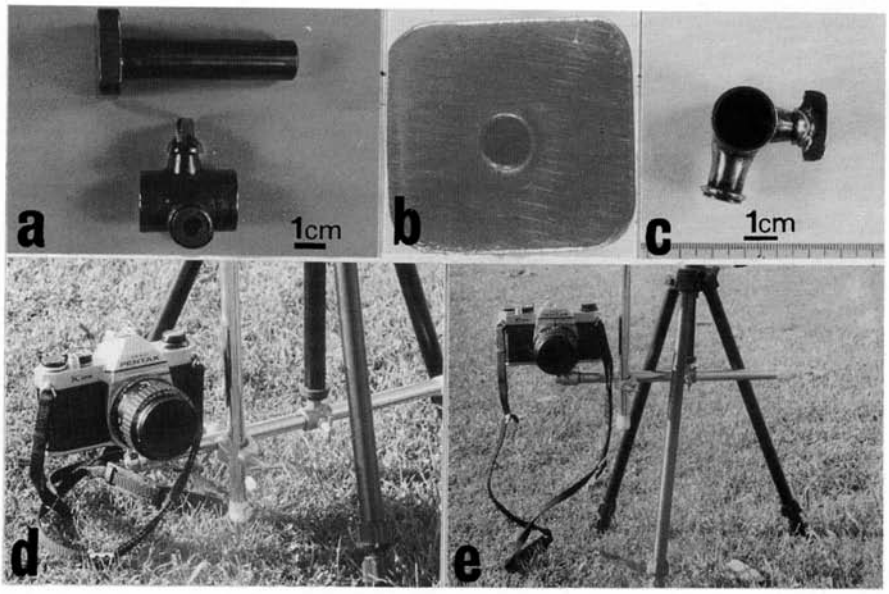

Fig.3 (a - c) Showing close-ups of extension bars for frame attachment. (a) both extension bars and their dimensions; (b) face of extension to tilt head plate, showing central ¼" bar Whitworth thread; (c) side-view of extension connexion to central stem. (d - e) Showing tripod and adaptor with camera attached. (d) For use close to ground level; (e) in an elevated position.

illustrated in Fig. 2b-c. The horizontal frame rod or support arm for the camera is terminated with a brass bush (either sweated in or attached with a pin) with a ¼" Whitworth thread through the centre, to take a commercially available ball-and-socket camera attachment with tightening screw (Fig. 2a). Close-up views of the extension bars are shown in Fig. 3a-c.

Precise camera height adjustment is achieved simply by winding up the adjustable central stem as shown in Fig. 3d-e, or, if needed, by extending or shortening the lengths of the tripod legs. The ball-and-socket camera attachment provides angular and rotational flexibility for less accessible specimens. The lowest achievable working distance is determined by the dimensions of the extension bar attached to the central stem, and can be modified accordingly.

We have used this system mainly with a *Pentax K1000* camera and 50 mm Macrolens, but equally good results have been achieved with an *Olympus OM 1* camera and a bulky *Vivitar* 28-85 mm zoom-lens with Macro-facility. Examples of the results obtained are shown in Fig. 1.

REFERENCE

DICKSON, G (1987). Photographing Fungi — 2. *The Mycologist 1, 124-125.*