THE TINY WORLD OF THE HAND LENS

By

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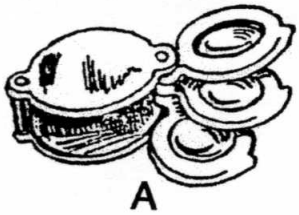
Why bother with a hand lens? The hand lens enlarges what you can just barely see with the naked eye, but not much beyond. It does not take the place of a microscope. The great virtue of the hand lens is its portability; you can take it anywhere. It works with or without eye glasses. Although it does not have to be held up to the eye for viewing, best results come from a hand lens held near to your "best" eye, with the specimen brought up close for clear viewing. Focusing the hand lens depends on the distance, usually very short, between the lens and the object viewed.

Anything you can see with a hand lens is fair game for mushroom study. Minute features such as texture of the cap surfac stalk ornamentation or hairs, also gill edges, often described in field guides, as well as other diagnostic characteristics, are best examined and verified with a hand lens.

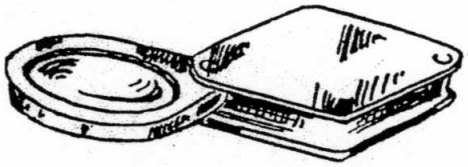
If you are planning to buy a hand lens, consider the following:

• Mail order purchase is not recommended. You can't check the quality of the lens or its focal length in advance. Further, postage, taxes, and handling fees added to the list price will likely make the cost equal to, if not more than, a better hand handlens purchased locally. College bookstores, local scientific societies, mining outfitters and flytying supply shops are possible local sources. Expect to pay between $15 and $35 for a good quality lens.

• What strength to look for in a hand lens? 16 power is standard strength, and most models offer an acceptably large field of vision. Lens quality can be judged by tryout at point of purchase. Some models have attached protective cases. There are, of course, other models for specialized uses. Although a triplet (A), or even doublet, lens, offers a variety of magnifications, most owners find themselves using the highest magnification nearly all the time. Changing combinations of lenses can become annoying. Also, the more lenses between your eye and the subject, the dimmer the view, because each lens absorbs light. Thus, you may find a single lens, (B, C below), with magnification you like more satisfying to use, and quite possibly cheaper, than a combination lens.



A



B

C

Your hand lens deserves tender loving care. It's been precision ground in soft glass, and, like a camera lens, scratches easil Keep it in a pouch (the toe of an old soft cotton sock or a home-made pouch of all-cotton flannel are fine). If dust should accumulate, blow it away gently, use a squeeze bulb, and lens tissue only, not Kleenex or toilet tissue, to clean it.

WEAR your hand lens. That way, you won't lose it, and other people will be discouraged from asking to borrow it if it's o a lanyard around your neck. Lanyards are inexpensive, from $1.00 to $2.50, depending on features and where you choose t make your purchase. Wearing your hand lens will guarantee that you'll be properly equipped and in demand where the action is at the identification table.

You will be able to use your hand lens for rough measurements. If you also have a small ruler, inscribed with metric (preferably) measurements, you may be able to include it in your hand lens view of the object you are studying.

A portable light source, such as a study lamp, tensor lamp, or draftsman's lamp which you can move around to illuminate the object you are studying is essential for indoor work. Often a shift of the specimen or light will highlight contours or other detail of surfaces you are viewing. Just remember, lamps are a heat source and can dry out your materials very quickly and, in some cases, will cause fading of colors. In the field, a flashlight can work very well.