

## 3-110-H10 Ann Arbor™ Roller Press Instructions

### Warranty and Parts:

We replace all defective or missing parts free of charge. Additional replacement parts may be ordered toll-free. We accept MasterCard, Visa, checks and School P.O.s. All products warranted to be free from defect for 90 days. Does not apply to accident, misuse or normal wear and tear. Intended for children 13 years of age and up. This item is not a toy. It may contain small parts that can be choking hazards. Adult supervision is required.

### Introduction:

Fish scales are often studied in detail, because the fin markings on a fish scale record the age and growth patterns of a fish. However, when dry, a fish scale often curls and warps, and consequently becomes difficult or impossible to read and measure through a microscope, power magnifier, or microfiche machine.

The solution to this warping is to make an accurate impression of a fish scale without heat in a suitable plastic. This plastic must remain flat for easy reading and measuring. An acceptable solution was developed by Dr. Sanford H. Smith, in the Progressive Fish Culturist, 16(2): 75. 1984

### Safety:

Keep fingers and other objects out of the gears! There is a safety guard to prevent fingers from being pinched by the moving gears. Keep it in place; do not remove it.

### Maintenance:

Keep the gears and bearings free of dirt and dust by keeping the press covered when not in use. If dust and/or dirt collect on the press, carefully wipe the debris off, using a damp cloth.

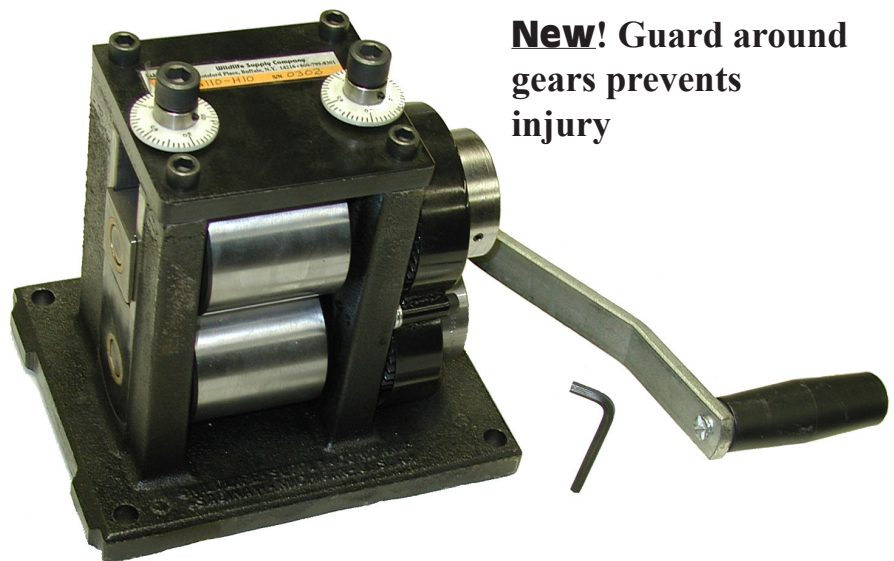
A tiny amount of grease on the gear teeth is all that is needed for lubrication. All roller shafts pass through permanently oiled bearings which do not need oiling. The threads on the pressure dials need only light oil. They should turn easily but not loosely.

### How To Operate:

1. Place two slides between the rollers and adjust the pressure dials on top of the press with the included allen wrench so that the slides pass through the rollers.  
*See Diagram 1.*
2. Remove the slides. Decrease the

allowable gap by 10/1,000th of an inch by turning the pressure dials.

3. Place the fish scale(s) between the two slides (ridges up or down) and run it through the press.
4. Increase or decrease pressure until a suitable impression is obtained.
5. Considerable pressure is required to turn the press handle while applying the necessary pressure on the slides. Slight variations in the plastic thickness may cause an occasional poor impression or require extra force to turn the handle. In this case, adjust the roller pressure to obtain the results you need.
6. The plastic slide covering the flat, or inside side, of the fish scale can be used over and over again.



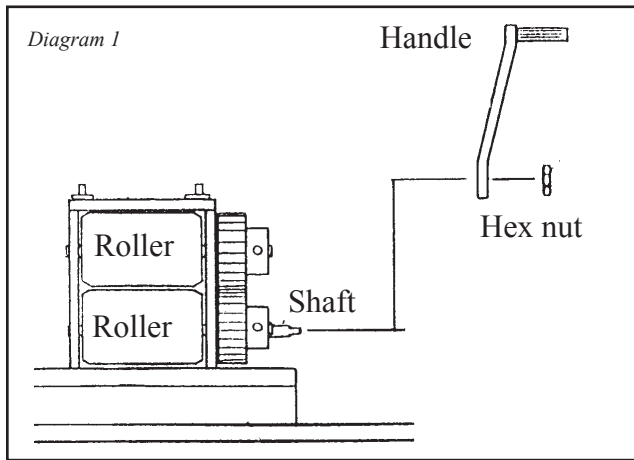
**New! Guard around gears prevents injury**

**Specifications:**

This press is designed to produce an accurate impression of a fish scale in plastic, usually on a 24 x 76 mm (1 x 3") or 76 x 125 mm (3 x 5") plastic slide. [These slides are available from Wildlife Supply.] Its rollers are made from hardened steel with an extra hard smooth surface for long life. Gears are large because large forces are needed to make a long-lasting impression. The two calibrated dials are necessary for using different thicknesses of slides, since plastic slides vary in thickness from lot to lot.

After the fish scale impression is made, essential dates or codes can be put on the plastic slide by using a fine point permanent marker. To prevent loss of the scale identity, the slide is often stored in a small envelope with its original fish scale(s). This envelope [available from *Wildlife Supply*] helps make finding a particular fish scale easier and keeps the scale with its slide. It also provides more information than can be placed on a slide.

The slide is easy to observe and measure both by bright field and dark field illumination.



**Suggested slide thicknesses for different types of fish scales**

0.50 mm (0.020")	= Trout, salmon, tullibee
0.76 mm (0.030")	= Young fish - many species
1.00 mm (0.040")	= Bass, walleye, perch, sucker, sunfish
1.50 mm (0.060")	= Carp

**P/N 031220**  
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**Accessories:**

Plastic slides to fit the Roller Press are available from Wildlife Supply®, as well as envelopes to hold slides along with original scale(s), imprinted with essential information.

**Fish Scale Envelopes**

**114-B series.** Many scientists collect fish scales, make impression slides of the scales and store them in small envelopes along with the original scales for easy reference. Envelopes come with or without a gummed flap; with or without printing; and fit our 1 x 3" slides only. *Ungummed fish scale envelopes are used in the field to store collected scales. Gummed envelopes are often used in the lab for permanent storage of impression slides.*

**Printing includes:** Scale sample #; species; length; weight; sex; state of organs; location; gear; date; [initials or name of] collector.

**Envelope dimensions:** 57 x 89 mm (2.25 x 3.5")

Scale Sample No. _____
Species _____
Length _____ Weight _____
Sex _____ State of Organs _____
Location _____
Gear _____ Date _____
Collector _____

*Envelopes are also available in Rite in the Rain™ waterproof paper. (No. 110-G23)*

**Fish Scale Impression Slides**

**112-A series.** Ideal for any fish study as well as for use with our Ann Arbor™ roller press. An effective way to make permanent records of fish scale sizes. Each slide is made from clear cellulose acetate plastic in your choice of 2 sizes and 4 thicknesses and is easy to observe and measure both by bright field and dark field illumination.

**Visit us at: [www.wildco.com](http://www.wildco.com)**

“In our experimental work with the roller press, we sought to obtain a light impression in which the finest features of the scale, including the thin outer margin, were replicated. We are confident of having produced an impression which casts a projected image with features as fine and accurate as those from the scale itself and, in some instances, with less objectionable light refraction.”

*From Smith, Sanford H., Method of Producing Plastic Impressions of Fish Scales Without Using Heat.*

*The Wildco® Ann Arbor™ Press was our second product! It was developed in conjunction with the Great Lakes Fishery Labs, U.S. Fish and Wildlife, Ann Arbor, MI*