

# PRINTING INTAGLIO PLATES

## Variety of Effects from One Plate

Wiping an intaglio plate is like conducting the score for an orchestral work. The information is all in the plate, but the director, or in this case the printer, has many choices to make about what to emphasize and what to de-emphasize. While learning to print I will ask that you wipe the plate as a whole. Leaving excess ink on the plate to create tone is not unethical, but it is a shortcut that avoids learning to make the plate carry all of the information needed. In general, if the direction of your hand's movement is visible in the print, it is not well printed.

### **Making Ink from Scratch:**

The ink used for intaglio printing is oil-based. Traditionally it is made from plate oil, vine black, and bone black pigments. These pigments are truly made out of burnt bone and burnt vine. Plate oil is linseed oil that has been heated in a closed chamber beyond its burning point. Under these conditions it changes character and becomes a bit more rope-like and clings to itself. Each printer will have his or her favorite mixture for ink and may select different characteristics for each print, or even for specific areas within one plate.

Mixing ink from scratch: By starting with the actual pigment and oil one can make their own ink from scratch, however, it improves with age and is best used after being allowed to sit for up to two weeks. Starting on a glass surface with bone black and vine black one should put out quantities of pigment approximately equal to a golf ball in volume for each pigment. These piles of pigment ( usually conical) should be mixed with an amount of oil comparable to yet another golf ball. In other words, there are two volumes of pigment for one volume of oil.

One then should take a putty knife and, tentatively at first, begin to paw or simply manipulate the pigment inside the oil and fold it over onto itself. Push down and pull until the pigment begins to bind with the oil. Repeat this folding over and pulling until all of the pigment is consumed. The goal at this point is to make the stiffest possible combination of oil and ink.

You will soon discover that if you stop mixing the ink that its appearance will change. While you are mixing the ink with the knife, it may have a granular appearance. As soon as it is allowed to settle, a gloss will come over the surface. This is

because the oil has not been thoroughly integrated into the pigment. Working with a larger volume of ink this stage will eventually develop ink with a distinctive property. As you pull the knife towards yourself the shine, or gloss, will follow the knife approximately 1/2inch behind. Hand made ink should be set to one side once it reaches this condition.

The next step in making one's own ink is grinding or mulling. The glass muller is usually shaped like a very large Hershey's kiss. Mulling begins by... placing a smaller volume of ink, perhaps a quarter of the volume discussed above, on the glass slab... placing the muller on top of the ink gripping it in two hands... then beginning to force the muller back and forth across the glass. This action tears the ink into smaller components and reassembles it. If it is one's intention to print the same day the ink is mixed, the majority of one's time should be spent mulling this is where the ink reaches it's finish. To assure consistent results the printer might count fifty or a hundred strokes, back and forth, tearing and reassembling the ink.

### **Characteristics of Ink:**

The major difference between commercially made inks and its handmade counterpart becomes evident when ink is allowed to stand overnight. The handmade ink will still be usable the next day and will, if anything, improve. The commercially made inks will have, at least, a dry skin over the surface and will be unusable.

The qualities that can be made in the ink can be determined by oil content. They can be extremely oily which results in an overall gray film, or they can be extremely stiff in which case the results is a relatively clean print.

The more bone black that is in the ink the greater the contrast. This is caused by the abrasive quality of bone pigment.

Vine pigment is a finer pigment that clings to the surface.

Thus, oil will cling to a surface and vine by itself will cling to a surface and the resulting ink, if they dominate, tends to create a brownish coat over the entire plate regardless of how the plate is wiped.

The artist can make their decisions after printing proofs as to the quality they find desirable.

### **Traditional "Run and Break" Consistency:**

A traditional way of mixing ink for printing is to add #3 plate oil with a knife until a consistency is reached at which a string of ink flows from the knife when held aloft. A guiding standard consistency will run and break in a rhythm comparable to one calmly saying "run" and "break".

The choice of oils with which one mixes the ink will have an impact also. Number 3 plate oil has a specific syrupy consistency. Lower numbers including those with 0000 are more like water and ink mixed with them is shorter and comes off the plate quicker. Higher, numbers all the way up to #8, become increasingly stiff and sticky. This makes more work for the printer but the result is a darker plate overall.

### **Inks Supplied in Class:**

Commercial inks that will be available in this shop include for the most part graphic chemicals etching black #514 which is a bone black. Other inks you may find in the shop will be Organic Black from Daniel Smith and occasionally Portland Black by Gamblin. Unlike the handmade ink all of these commercial inks will dry and coagulate within themselves overnight on the ink slab.

## **WIPING AN INTAGLIO PLATE**

### **Applying Ink**

An intaglio plate takes time to print. The first step in wiping the plate is to place the plate on the hot plate designated for this purpose. The plate should be allowed to warm to a "blood heat." Coat the plate evenly with ink and through the use of rollers, cards or something called a dauber assure that ink is in every crevice. The ink is picked up from the mixing slab on a roller and spread over the warmed intaglio plate. At this point it might be helpful to take a card a stiff piece of matt board, or even a plastic squeegee and squeegee the ink into the tiny crevices of the plate. Any small places that have not been inked will show themselves against an even black coat of ink. Remaining areas can then be worked with the card or the dauber.

The dauber is a rolled piece of felt which is taped into a hard cylinder. It is most useful after it has been aged and coated with dry ink.

### **Initial Wiping:**

Once coated the plate has to be wiped with tarlatan. The first

tarlaton should be a relatively dirty one and the printer works his or her way toward cleaner tarlatons. The most efficient tarlatons are actually somewhere in between clean and clogged. They have some dried ink already coating them, but remain open. These tarlatons attract ink better than brand new ones.

When tarlatons are first brought out they contain a great deal of starch. Depending on one's preference, much of the starch must be removed by rumpling the tarlaton up between your hands or rubbing it across a sharp edge of the press, pulling from one end to the other, as if one were pulling a bath towel behind one's back. This breaks the starch and loosens the fabric. You can actually see white powdery starch falling from the tarlaton when you do this.

One begins printing by wiping the tarlaton over the plate while it is warm. The tarlaton is passed across the plate with down force or pressure fairly minimal. Most beginners over- estimate the amount of pressure used. Comparing the down force to stroking a cat sitting in one's lap is perhaps a good description of the maximum down force. The lightest force used near the end might be comparable to stroking the hairs on one's forearm.

The first tarlaton used should be one that is well aged and coated with ink. Ideally, it should not have completely clogged areas. one can examine the tarlaton by looking through it to see that the pores are still open. Tarlaton should not be torn in to small scraps. Pieces roughly a yard square should be balled up so that no loose edges are showing. Generally wiping proceeds while the plate is hot until the image is half visible. At that point the plate is moved off the hot plate to a cooler surface where the ink begins to set up.

Wiping continues with progressive cleaner tarlatons and may conclude with the heel of the hand or combination of the hand and the tarlaton. Students should avoid the temptation to leave selected areas of ink on the plate. Instead the entire surface should be wiped evenly and if an area is to be enriched one should use retrouage which is described below.