

# DRAWING TECHNIQUES FOR PUBLICATION



Stanley Bowstead and Thomas M. Eccles

Frontispiece: *Stag beetle*, 1505 by Albrecht Durer (1471-1528), who said:  
“It is indeed true that art is omnipresent in nature, and the true artist is he who can bring it out.”

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Entomological journals require that descriptions of insects that are new to a country or new to science must be accompanied by a habitus illustration. A habitus drawing is a drawing of a whole insect, illustrating the peculiar characteristics of that species. It may be a simple outline drawing or a highly detailed portrait, the form and choice of technique being dictated by its purpose e.g. scientific publication, field guide, book illustration etc. These notes set out the methods that we have found to be most dependable in producing accurate drawings for this purpose, especially where large numbers of images need to be created. To illustrate a descriptive work, a drawing does not require artistic visionary skills; it simply requires plenty of practice until the participant is comfortable with the methods. Once this is done, these simple technical rules have been shown to produce accurate clear drawings.

## *PRELIMINARIES: Why drawings?*

With the recent remarkable developments in digital macro photography, it may be asked with some justification if autographic illustration or drawing, has a place in modern entomological research.

My own opinion is that drawings are still as valid as ever. The very best macro photographs of insects still require specialised equipment which is generally beyond the financial reach of most individuals. Compact digital cameras with macro facility can produce very creditable results, but as the subjects become smaller, depth of field problems arise and it is not possible to have the entire insect in perfect focus. Alternatively, a drawing provides a clear depiction of its subject right down to some of the smallest structures such as setae and punctuation.

The act of drawing in itself is highly conducive to improving ones knowledge of the drawn subject. I would go so far as to say I don't really understand the form of a subject *until I have drawn it*.

Ask anyone to draw an object with which they think they are very familiar – their own car for instance. The results can be very illuminating! They look, but they do not see. However, if they were to draw with the car as a model in front of them it would impress the form and appearance of the car indelibly upon them.

Drawings can be aesthetically pleasing. A well-executed illustration especially of subjects like insects which are intrinsically beautiful, is a thing of beauty itself and not necessarily out of place in serious scientific enquiry. There are really only two types of entomological illustration: those which appeal to us by their beauty and which celebrate the infinite complexity and detail of their subject and those which elucidate and inform. It is possible of course, for a single illustration to be both.

The point of departure is always the specimen. It seems commonplace, but it cannot be over-emphasised that it is important to *look* at the specimen whether it be an entire insect or a part. Every subject presents its own peculiar challenges to the illustrator who must decide how best to portray what he sees in a two dimensional representation with the techniques at his disposal. The final aim being to achieve a drawing that is both accurate and illustrative.

## *THE TECHNIQUES*

The two accounts below detail the two Authors' slightly different approaches to drawing, listing the materials and methods that each employs.

## *METHOD 1 – Stanley Bowstead*

### *MATERIALS*

1. Cartridge Paper.  
This is for the original drawing; look for a smooth surface which will be sympathetic to fine lines and strong enough to take some corrections with a rubber.
2. Draughting film.  
This is for tracing to produce the symmetrical half of the habitus and for the final ink drawing. This strong material will allow you to make small corrections to the final ink work by very careful scraping with the point of a Swann Morton scalpel.
3. Map Repair Tape (Scotch Tape).  
To hold the drawings on the board.  
To hold tracings in place whilst working.  
To assemble the final layout of drawings and numbers to produce a plate.
4. Pencils.  
Fine auto pencil with micro-leads, grade HB or F, for drawing fine clear lines.  
Coarser pencil, grade B for tracing. A quality eraser is very important and I always use Staedtler Mars Plastic erasers which should be kept clean between uses by rubbing on a spare piece of cartridge paper.
5. Pens.  
Rapidoliner by Rotring, designed to be used at an angle of 45 degrees for free drawing but with predictable thicknesses of .25, .35, .50, .70. The Copic Multiliner series of high quality fibre point pens also works very well in the similar sizes and they also produce a very fine 0.03 size that is perfect for writing locality and determination labels.

### *EQUIPMENT*

The most difficult task in producing an accurate drawing is to place all the parts of the subject in the right place, whilst ensuring that they are of the correct proportion to other parts of the same drawing and to the same scale. To achieve this, the most convenient piece of equipment is a Camera Lucida which is more accurately described as a Tracing Device. All the top microscope manufacturers produce such a device to be used with their own microscopes but they are very expensive when bought new. I have used two different types.

The first is a special x10 eyepiece with an internal prism, which deflects some of its light onto a paper that is placed in front of the microscope, this goes well with the Russian Biloam microscopes or other older brass types designed to work with any compound microscope. These are sometimes available second hand.

The second option is a mirror arm and prism, which fits many microscope's eyepiece or are now designed by modern manufacturers to be placed between the objectives and eyepiece on a modular design. This type also works well with stereo microscopes.

PROCESS

1. Find a model of the style of drawing that you wish to produce. I prefer to look at the work of authors who have the drawing skills to produce their own figures to demonstrate the characters that they are describing, thus giving the work a singular integrity.

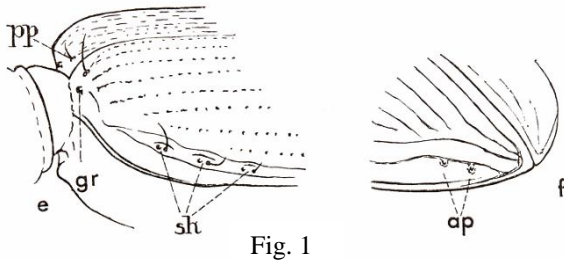


Fig. 1

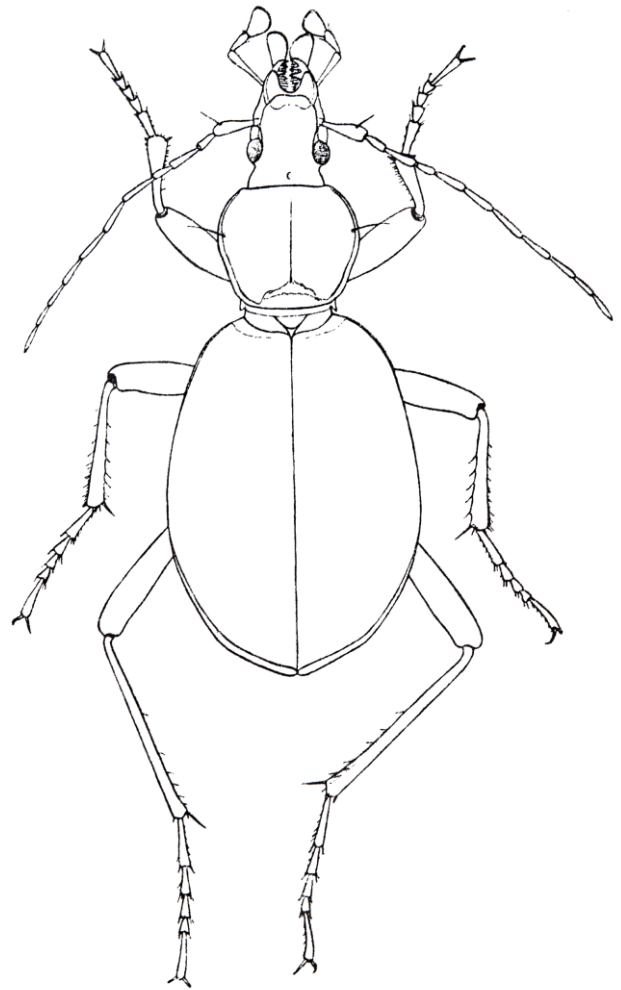


Fig. 2: *Cychrus caraboides*

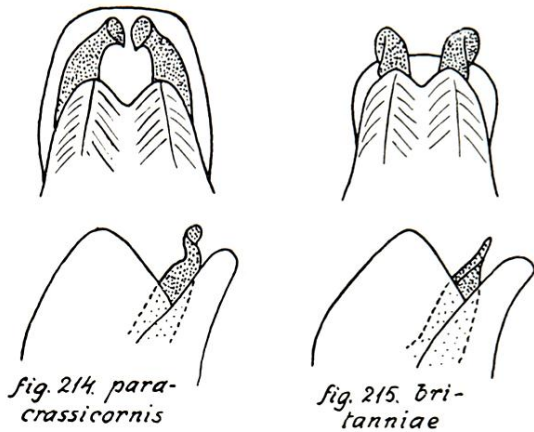


Fig. 3

Figs. 1 and 2: Illustrations from *Handbooks for the Identification of British Insects, Coleoptera, Carabidae*. by Carl H. Lindroth, 1974.

Figs. 3 and 4: Illustrations from *Danmarks Fauna, Biller XV11, Rovbiller 3*, by Victor Hansen, 1954.

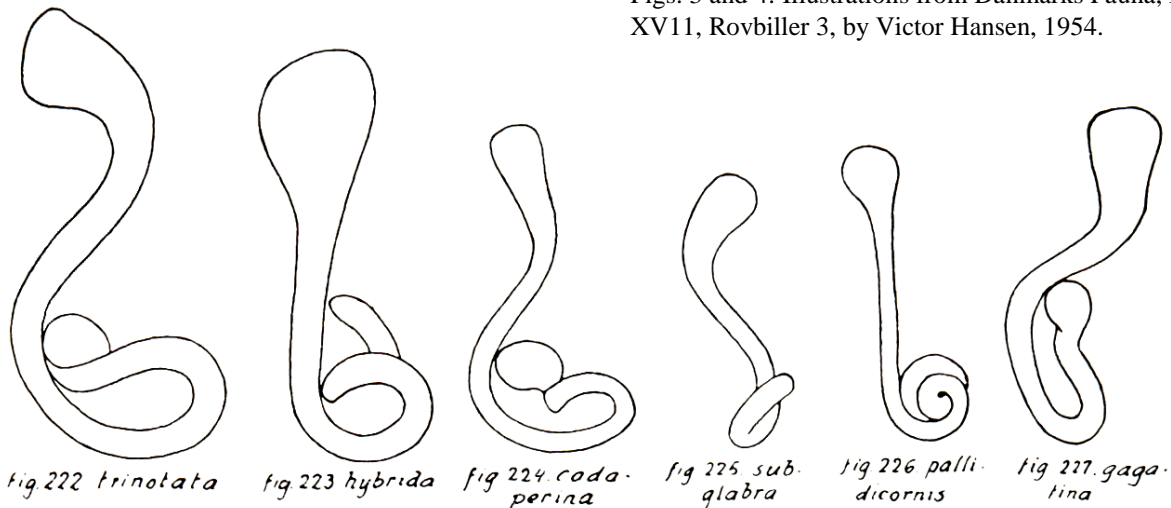


Fig. 4

Look for examples that show the distilled essence of the subject, with emphasis only on the characters that you will be writing about in the publication. Aim for a drawing style with clean lines and the minimum of modelling to show light and shade.

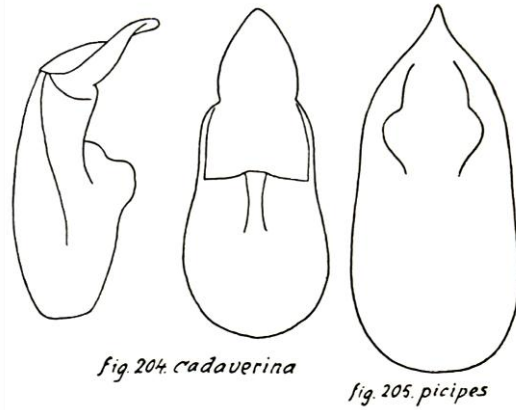


Fig.5

2. Stage the specimen that you wish to draw on card so that it can be illuminated on the microscope stage. Ensure that the specimen is not tilted to one side and that the antennae and legs are neatly displayed, at least on one side of the specimen.
3. Place the specimen on the microscope stage and select a magnification which will fill the eyepiece field with the whole insect.

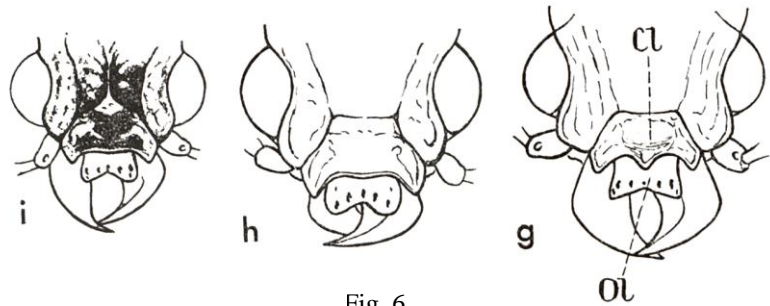


Fig. 6

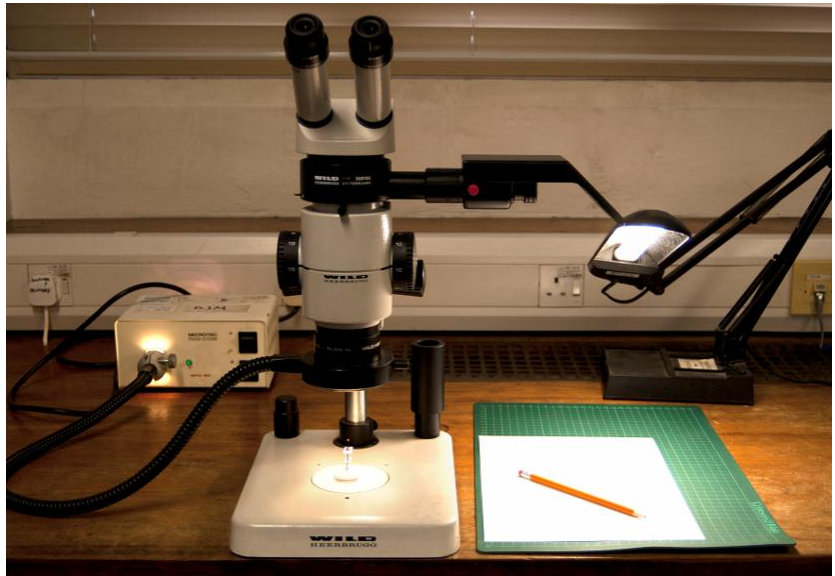
Fig. 5: Illustration from *Danmarks Fauna, Biller XVII, Rovbiller 3*, by Victor Hansen, 1954.

Fig. 6: Illustration from *Handbooks for the Identification of British Insects, Coleoptera, Carabidae*, by Carl H. Lindroth, 1974

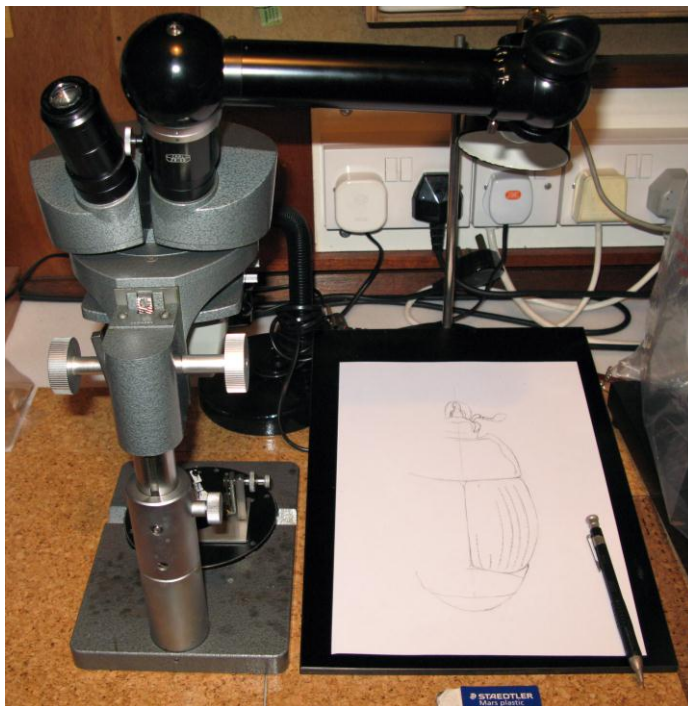


Left: The author's equipment for drawing most small coleoptera. The older Greenough type of stereo, with vertical eyepieces works well with a Beck or similar mirror and prism drawing arm. This type of instrument can provide a wide range of magnifications up to 100x. It is helpful if a mechanical stage is used for accurate movement of the specimen. Lighting of the drawing surface should be balanced by the use of some dimming device to harmonise with the microscope's own illumination.

4. Place a piece of cartridge paper on the board next to the microscope and under the mirror or prism. Draw a line of symmetry on the paper in pencil.
5. With the aid of a bench-lamp, balance the light that is shining on the paper with the light that is coming through the microscope.
6. Trace the outline of the insect on the left side of the paper – this is the easiest way of working for a right-handed person.



Above: A modern Wild drawing tube on a Wild M8 Stereozoom microscope with ringlight. Here the microscope can be used with both eyes whilst drawing.



Above: The author's Leitz stereo with the Zeiss camera lucida showing work in progress on an outline diagram of a histerid beetle *Marginotus neglectus* (Germ.)

The Zeiss Camera Lucida has several advantages:

- a. It can be attached to most modern stereo microscopes. It also has an insert which converts the eyepiece end to be fitted to the older microscopes with the smaller standard eyepiece size. It can therefore be fitted to any microscope both compound and stereo.
- b. It can be hinged out of the way to allow the microscope to be used in the normal way as and when required during work.
- c. The viewing eyepiece at the end of the tube incorporates a polarizing filter which can be adjusted to balance the light of the microscope image with the light to the drawing surface below.
- d. The viewing eyepiece can be turned through 45 degrees in two directions to permit the drawing surface to be either angled or flat on the bench.

7. Now that you have these left-parts of the insect roughly indicated, complete this part of the drawing with the camera lucida switched off. This is the stage at which the “real” drawing begins. With binocular vision, look critically at each piece of the insect and with the drawing at the side of the microscope, refine the original image with fresh crisp lines. It will benefit the final quality of the drawing if it is large, so that when it is reduced it remains clearly detailed in every part (fig. 7).
8. Trace this left half of the insect onto a piece of draughting film, and then use this tracing to transfer the symmetry to the right side of the insect (fig. 8).
9. Complete the whole insect by finally checking against the image of the whole insect seen under the stereo-microscope – fig. 9. At this stage light and shade can be introduced in a restrained way with the pencil. Clean hands are important to avoid smudging graphite from the underside of the hand onto the drawing.
10. Remove the insect from the microscope stage and replace it with a card on which you have marked an accurate millimetre scale, then with the tracing device mark out a scale line along the side of the insect drawing.
11. Tape the pencil habitus drawing to a board, then tape a new piece of draughting film over the drawing with 2 pieces of tape so that the tracing can be lifted if necessary to check on finer details in the original drawing (Fig. 10).

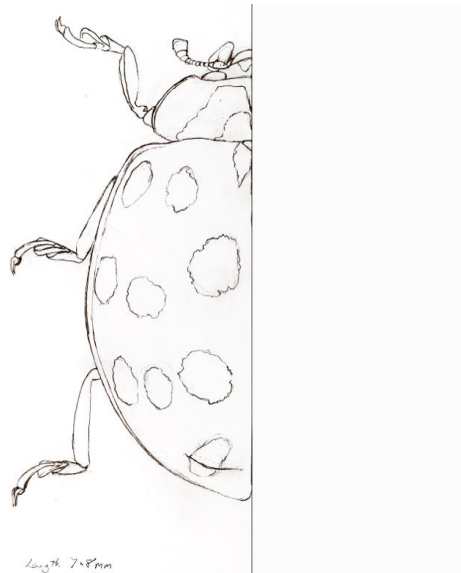


Fig. 7

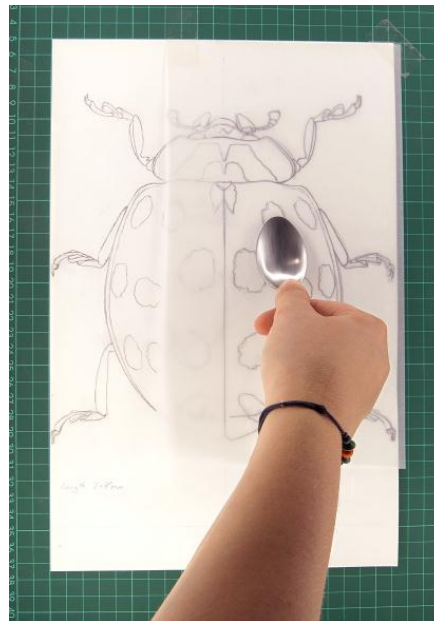


Fig. 8: The back of a spoon is a convenient tool for rubbing the back of the tracing.

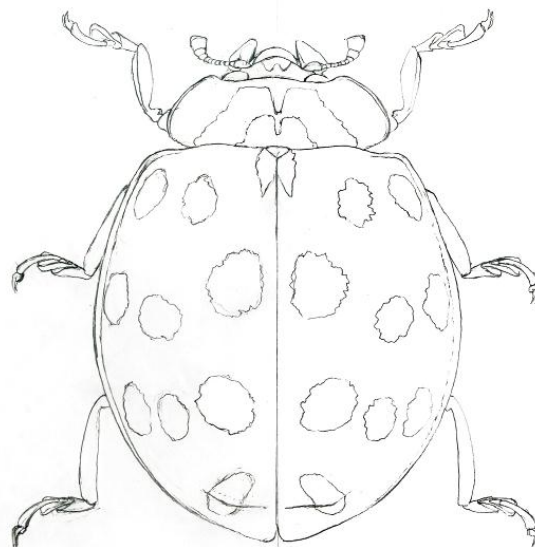


Fig. 9



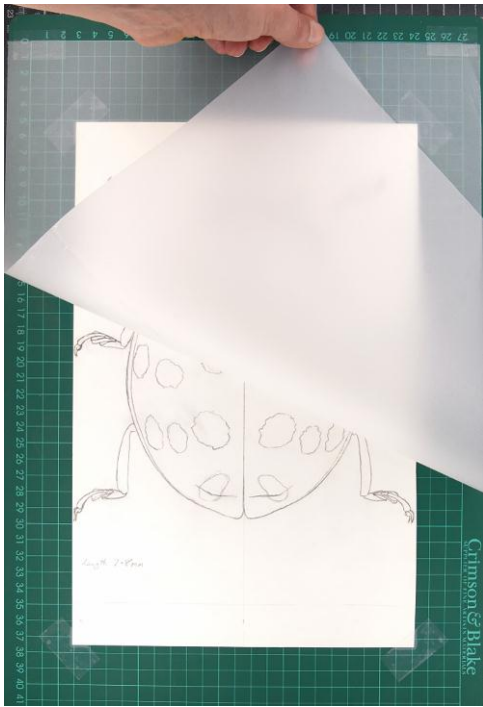


Fig. 10

14. Finally dot model the drawing to show form in a restrained style, (see fig. 12 on following page). Avoid placing the dots too close together as these could merge into black areas. Large black areas such as the spots on a coccinellid can be outlined in ink then filled in with black Indian Ink with a fine watercolour type brush. At this stage the very fine pubescence can be added with an outward flick of the finest pen in black or if it is pale pubescence then added by the new finest white gel pen on black areas for contrast as on the black legs of some coccinellids (see fig. 13). These finer touches of detail are possible working on this larger scale and will make all the difference to the finished quality of the drawing.
15. This method has two other great advantages. 1. Bad work can be discarded or altered, without detriment to the original drawing. 2. Slight errors can be easily scraped away from the surface of this fairly smooth film with a Swann-Morton scalpel (handle No. 5, blade No.11).

12. With a .70 or a .50 pen, outline the habitus in ink on the draughting film. Aim to produce flowing lines (this will require some practice on scrap paper). Draw the left outline using the hand like a compass. Let this dry then reverse the paper with the board and complete the other side of the drawing in the same way.
13. With a .35 and a .25 pen, complete the inner details of the drawing, taking great care not to work on the drawing when several areas have wet ink. At this stage it is a cleaner way of working to rest the hand on a piece of scrap paper to avoid any dirt or grease transferring to the finished drawing (Fig 11).

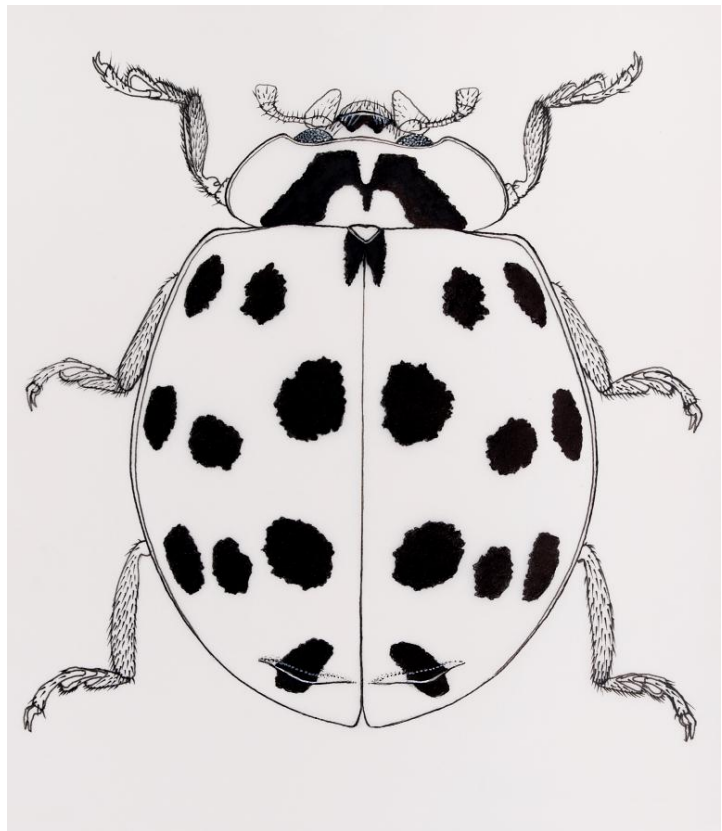


Fig. 11: *Harmonia axyridis* (Pal.)

Working on a large scale habitus figure facilitates the easier inclusion of pubescence on legs, head and antennae which would be almost impossible on a small scale drawing.

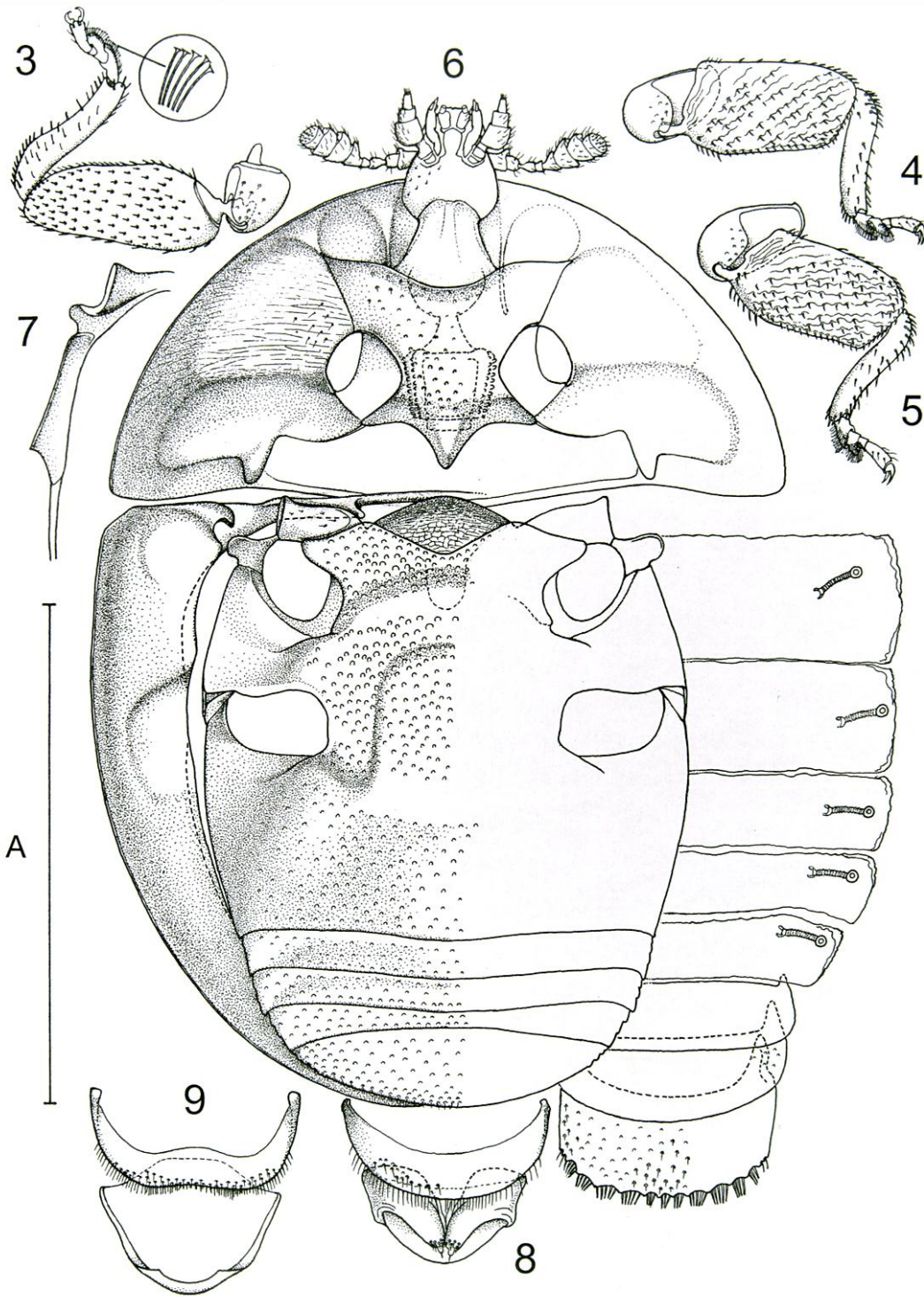


Fig. 12: *Cleidostethus meliponae* Arrow, from the genus *Cleidostethus* Arrow, 1929 reappraisal and transfer from Coccinellidae to Corylophidae (Coleoptera: Cucujoidea), Stanley Bowstead, Roger G. Booth, Adam Slipinski and John F. Lawrence.

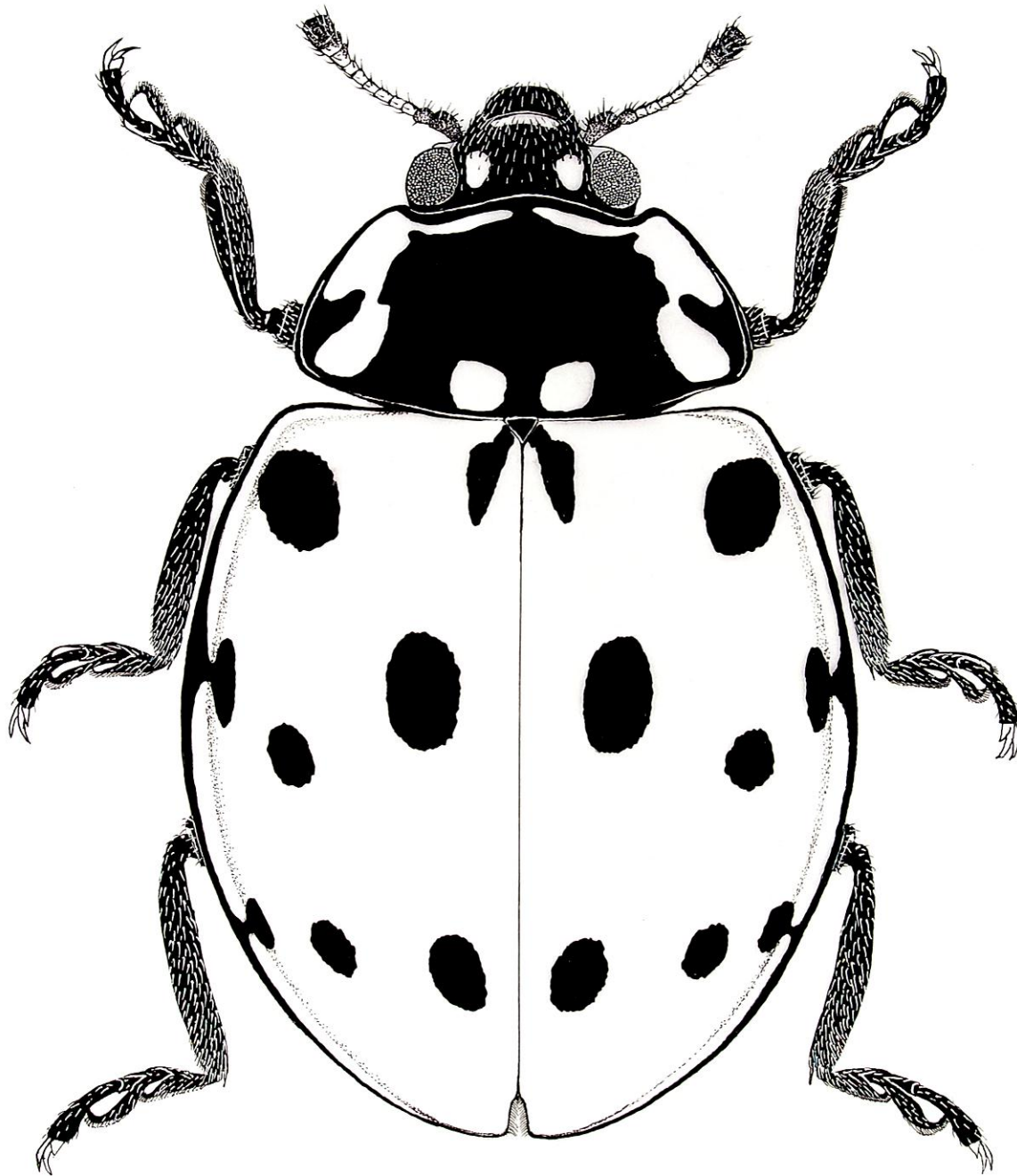


Fig. 13: *Anatis ocellata* (L.). Showing the use of white micropen for pale pubescence on areas such as the legs and head.

16. Assemble ink drawings onto a large sheet of paper, along with appropriate computer-produced numbers.
17. Photocopy the large master-sheet by laser photocopier (Canon seem to be the best) and reduce to see what the lines look like near to the scale of the final proposed publication (Fig. 14). With this top quality reproduction, a half-size reduction of the master-sheet would be quite suitable to send to the publisher.

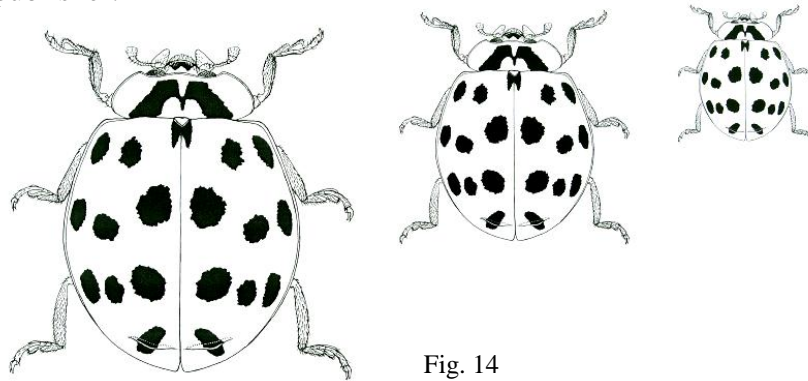
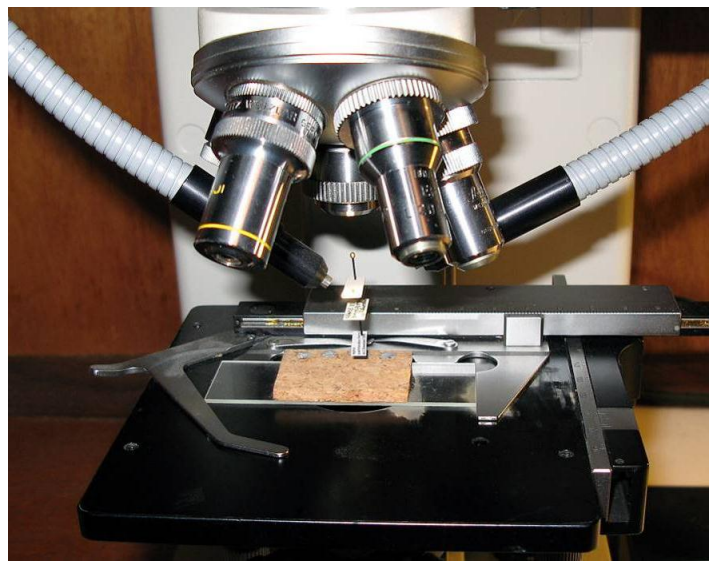
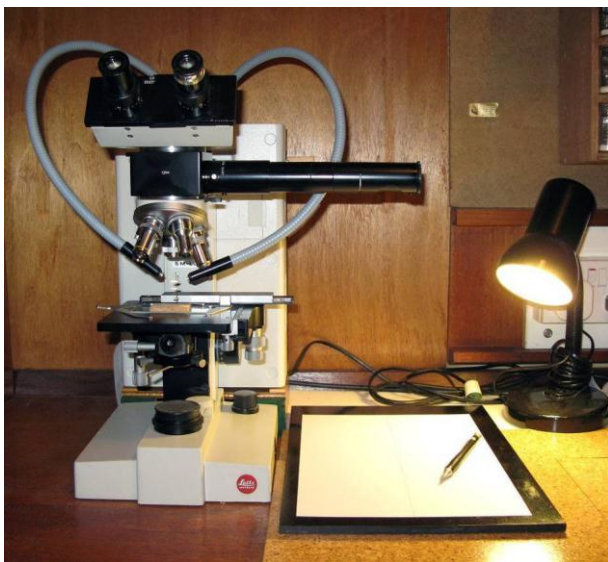


Fig. 14

18. The above techniques can of course be used to draw aedeagal and spermathecal figures. These are best drawn from transparency mounts by transmitted light. In most cases a compound microscope is used to get enough magnification for the study (see figs. 15 and 16). The specimen concerned must be in a temporary mount so that exact orientation can be organized by gentle manipulation of the specimen. Thus exact symmetry can be obtained in the drawing. This is particularly important with the armatures in aedeagal figures. The most convenient medium for these temporary preparations is glycerine which is soluble in water, is clear and seems to be just the right viscosity and refractive index. This work should be done before any permanent mounts are made. Some people are now storing these dissections permanently below the specimen in a micro-vial.



Figs 15 & 16 (Above): These two figures show the author's equipment for drawing aedeagal transparent specimens and minute habitus drawings of Corylophidae. Note the use here of long working distance objectives which permit the change of objectives without catching the pins on the specimen and the use of swan neck fibre optic illumination for drawing opaque subjects.

An alternative to the use of a camera lucida is to make use of the ability of many digital cameras to take photographs directly through the eyepiece of a stereo microscope. Even better results are of course obtainable with a built in digital camera on the latest more elaborate stereo, (fig.17), which combined with the appropriate computer software has the ability to take a stack of photographs, progressively focusing on different planes throughout the depth of a specimen and to finally combine all of the in-focus parts to make one completely clear photograph. In this way it is possible to capture high quality images of even very small specimens at close range with a potentially limitless depth of field. Also note the dome light that gives out diffuse all over lighting and eliminates areas of shadowing.



Fig. 17

The stages of this technique are:

1. Take a photograph of the whole insect or morphological character by one of the above methods.
2. Process this photograph in the computer using Photoshop or a compatible program to produce an image of at least A5 size.
3. Print this out onto paper which is thin enough for the light to shine through.
4. Place this print on a light box, (fig. 18a), tape an extra piece of cartridge paper over the top (fig. 18b) and trace the basic image through onto the new paper and so achieve one of the most difficult steps in your drawing, which is to get all the parts of your image to the same scale and in the right place, (see fig. 19), in free drawing this is a real challenge. The amount of detail to include at this stage will be learned with practice.



Fig. 18a: Photograph of an *Aphodius obliteratus* (Panzer) specimen, placed on a light box.



Fig. 18b: Cartridge paper covering the image ready to make the master drawing.

Now slide a plain piece of paper between your tracing and the photograph and tape the two to your drawing board next to your stereo microscope. By close observation through the stereo, proceed to enhance the basic drawing as you study each part of the image in detail. If you need to redraw a piece of the work then the in-between piece of paper can be slid out to get you back on track.

At this stage you can proceed to the final drawing in one of two ways.

Either:

1. Place a piece of thick tracing paper over the master drawing and secure it with tape at the top edge. Proceed as before to produce a detailed master drawing in ink. This has the advantage of easy repair of mistakes by careful use of a scalpel to scrape the surface of the paper. Also the original drawing is not lost, meaning that more than one attempt can be made.
2. The ink can be applied directly on to the cartridge paper and the preliminary drawing carefully rubbed out once the ink has dried. Where mistakes are made, small amounts of white acrylic paint or similar can be applied and then drawn over if necessary.

The image is now ready for resizing and preparing your plate.

Top right, Fig. 19: The initial outline drawing of the *Aphodius obliteratus* (Panzer) beetle, as traced from a photo using a light box.

Bottom right, Fig. 20: The final detailed ink drawing of the same beetle, drawn by Katherine Child.

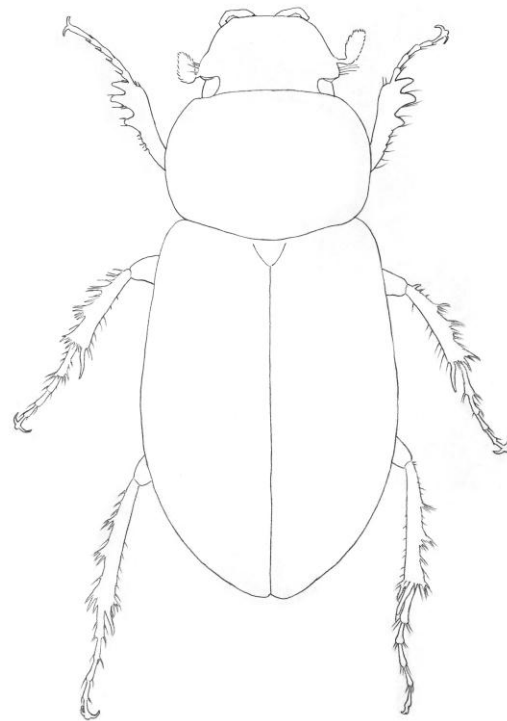


Fig. 19

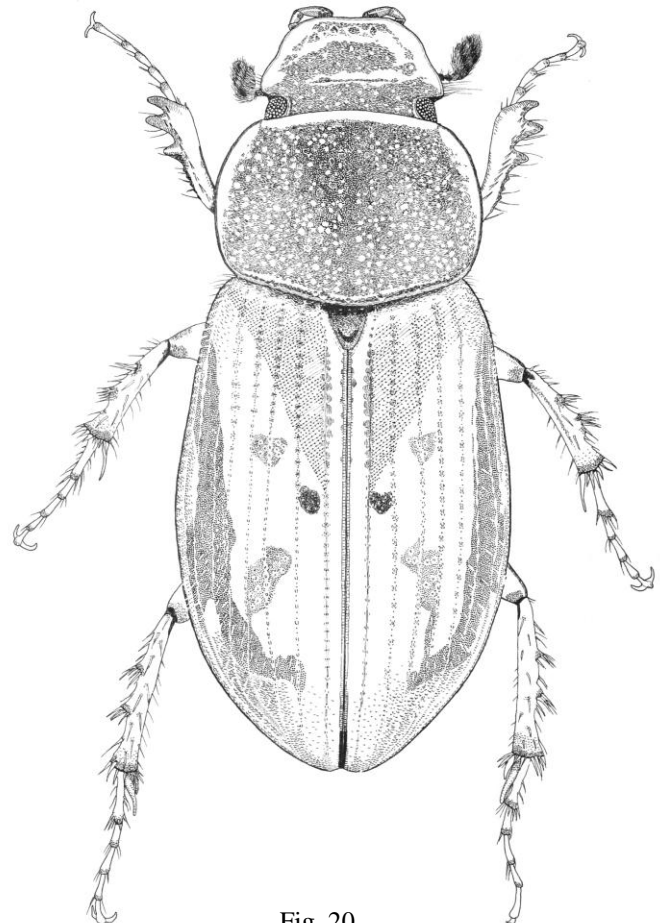


Fig. 20

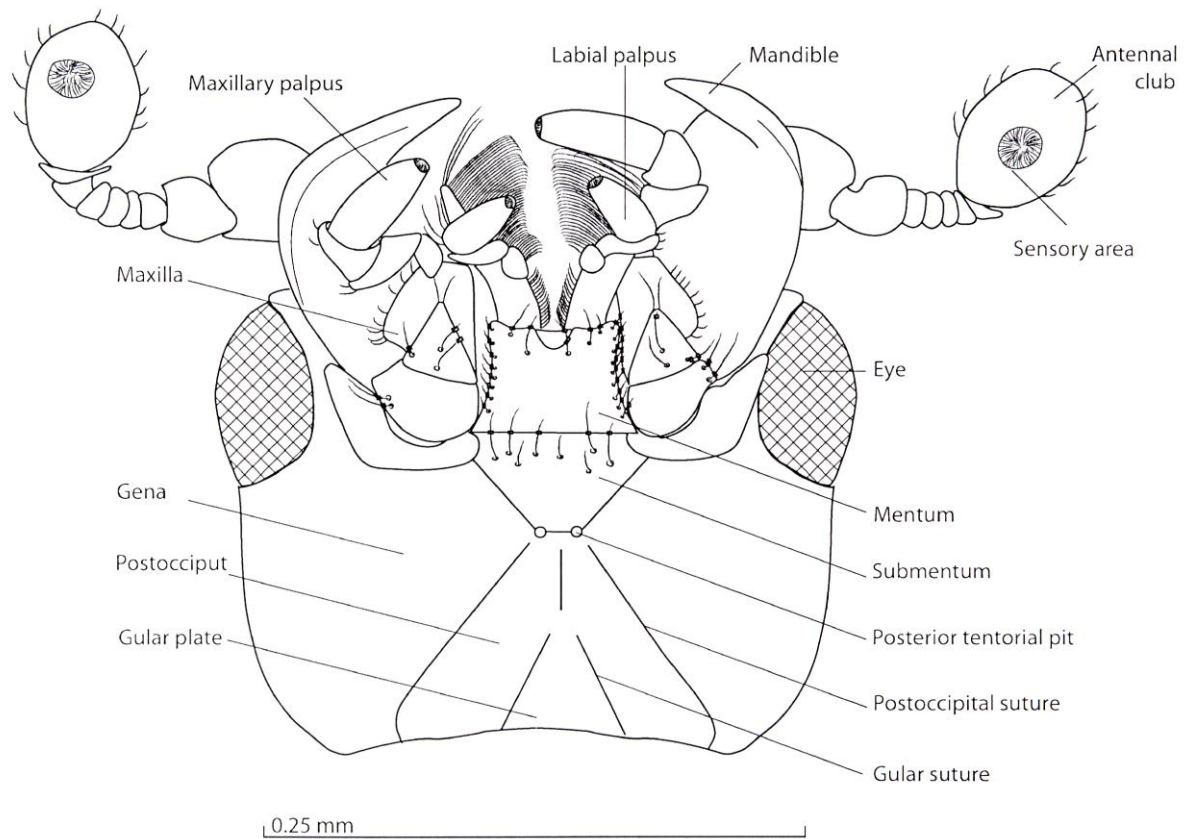


Fig. 21

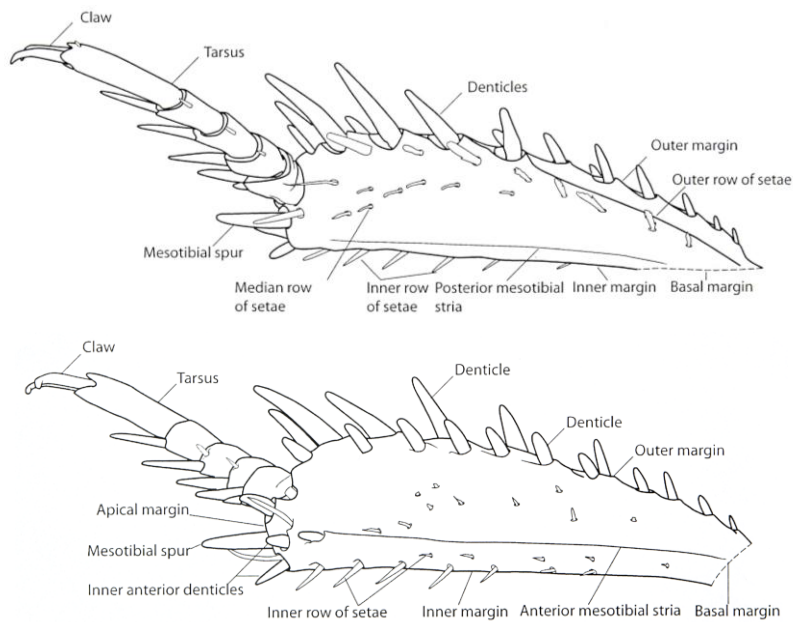


Fig. 22

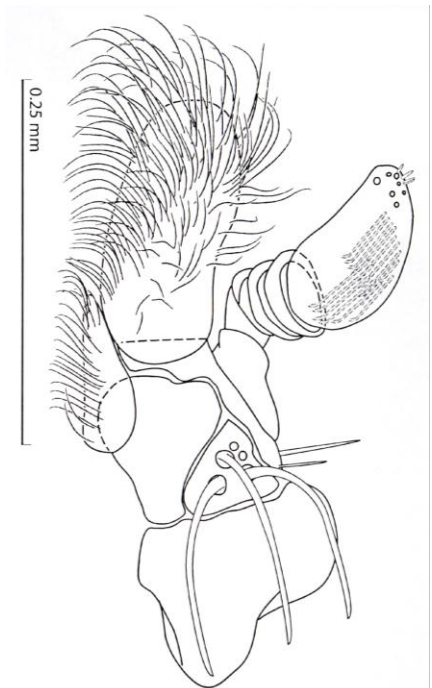


Fig. 23

Figs. 21 - 23 are excellent examples of drawings made using the light box method. These drawings form part of a richly illustrated work, comprising 766 figures, most of which are drawings, recently produced by T. Lackner, during his lengthy studies on *Histeridae* in Japan where drawing is still greatly admired and is a discipline of study that is insisted upon.

## METHOD 2 – Thomas M. Eccles

### HABITUS DRAWINGS

My earliest illustrations were done by simply observing the subject minutely and drawing directly on the board. Now I achieve a more accurate image by using a drawing tube or camera lucida attached to the microscope or by taking a digital photo. The latter will be imperfect for reasons stated earlier, but it will be accurate in terms of proportions and where parts are unsharp and out of focus these can be filled in by working from direct observation or by taking more than one photo at slightly different planes. From a number of such photos I arrive at a tracing of the entire insect on thin layout paper. I prefer this to tracing paper as I find it easier to work on.

I burnish the reverse of the layout paper with an HB or B pencil and transfer the image to the appropriate surface (board or paper) by tracing with a 2H or 4H pencil. What I have now is a feint but detailed pencil drawing which is ready for filling in and developing in the chosen medium.

It is not always necessary to draw all the appendages on both sides of the subject as one can flip the tracing over on the reverse side to obtain a perfectly symmetrical arrangement of these on the missing side. This only works of course if the subject was perfectly aligned for the photo.

A good example of a macro photograph which shows plenty of detail (fig. 24) can be used as the starting point for a well-proportioned, accurate drawing. Due to the difficulty of maintaining good depth of field at this small scale, this image is a montage of multiple preliminary images, (as detailed above in relation to fig.17). Figure 24 also shows use of an excellent diffuse lighting setup. The dome light shown can be effectively and inexpensively replicated using tracing paper or similar to soften harsh, direct light. This avoids strong highlights and will better show the micro sculpture of a specimen. The best compact digital cameras will produce excellent photographs (fig. 25) through the eyepiece of a good stereo microscope that has a nice wide diameter eyepiece; x10 or even better, x6 for greater depth of field.



Fig. 24: *Aphodius obliteratus* (Panzer).





Fig. 25: *Aphodius scrutator* (Herbst). An example of a macro photo taken with a compact digital camera.

## *DRAWING IN INK*

### *DRAWING SURFACE*

The drawing surface is here even more important than when using other media. A good quality card of the type known as “Bristol Board” is best. This has a very smooth surface which allows one to make a clean line or dot, unfurred at the edges. A slight disadvantage is that the ink remains wet for a little while after application, this only lasts for a few seconds but one must be careful to remain aware of it to avoid smudging.

Bristol Board can be obtained in A4 or A3 size pads manufactured by Strathmore or Goldline. I don't usually draw directly onto the card, but transfer my drawing from thin layout paper by tracing, using an HB pencil to provide the graphite and a harder 2H or 4H pencil, sharpened to a fine point, as the tracing tool.



Fig. 26

## PREPARING THE DRAWING SURFACE

The surface of the card or board can be enhanced by applying a light dusting of “Pounce” with a tissue paper. Rotring manufacture a version of this, as ‘Priming Powder’ in 100gm packs. Its purpose is to abrade the surface very slightly and also absorb any grease. The effect is very slight, but nonetheless important for drawings of high quality as it affects the flow of ink from the nib.

## PENS

The final drawing is done using two kinds of pen: I use a fibre-tip pen for the outline and for the shading and stippling I use an old-fashioned fine mapping pen with a Joseph Gillot 659 steel nib (fig. 27). This needs to be frequently dipped in ink to recharge it, but it is designed to give a few minutes’ worth of work between re-charges. A good nib will last for months, even years.

It may seem somewhat eccentric to use an old fashioned dip pen, but I prefer it to using fibre tipped pens as it gives better textures and the size of the stippled dot can be controlled by exerting varying pressure on the pen. The finished drawing has a less “mechanical” look compared with one done with a Rotring Rapidograph or fibre-tip pen.



Fig. 27

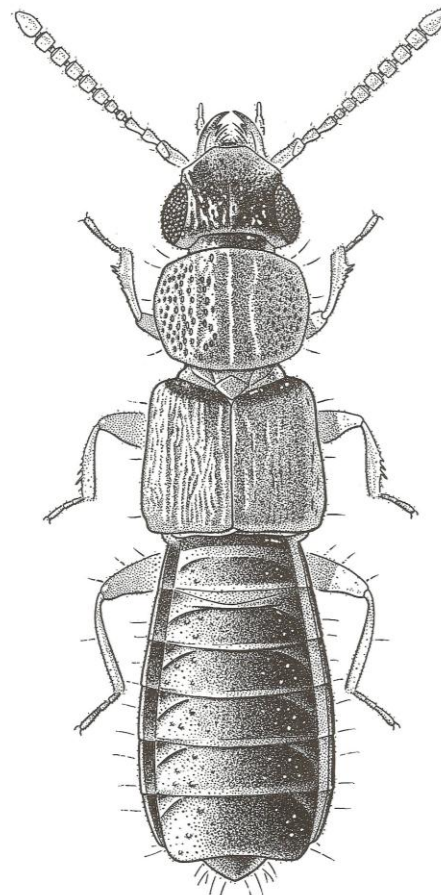


Fig. 28: *Anotylus migrator* Fauvel. Mapping pen and ink on Bristol Board.

## INK

The choice of ink is very important. For some reason, old editorial panels used to recommend black “Indian Ink” in their guidelines to contributors. I find this practically unusable as it quickly clogs up nibs even when diluted with a little water. Its only merit is that it is very black, but modern products now have this quality. Far preferable is a good artists' quality drawing ink such as that manufactured by Rotring. I dilute this with a few drops of water to facilitate the flow of ink from the nib, but not enough to affect the blackness.

## STIPPLING

With the outline and a few other details done with the fibre-tip pen, I proceed with the shading using a stippling technique with the mapping pen. This is done very carefully and deliberately and requires much patience and some skill. It is not possible to get the desired effect “in one go”, but it is necessary to go over stippled areas again once they are dry, to achieve the required density, not unlike putting another glaze over an area in a watercolour. I find it helpful sometimes to give another dusting of pounce between “glazes” when the work is completely dry. By judicious placing of the individual dots it is possible to achieve the illusion of three dimensional form as well as “local colour”.

A drawing can take many hours to complete, even over a period of days, depending on size and complexity. I generally don't make my ink drawings bigger than what will fit on an A4 size board. I work with my forearm resting on a sheet of layout paper with good light from a window or a daylight quality lamp. I seldom finish a drawing at one sitting, taking frequent breaks and usually work listening to music on the radio.

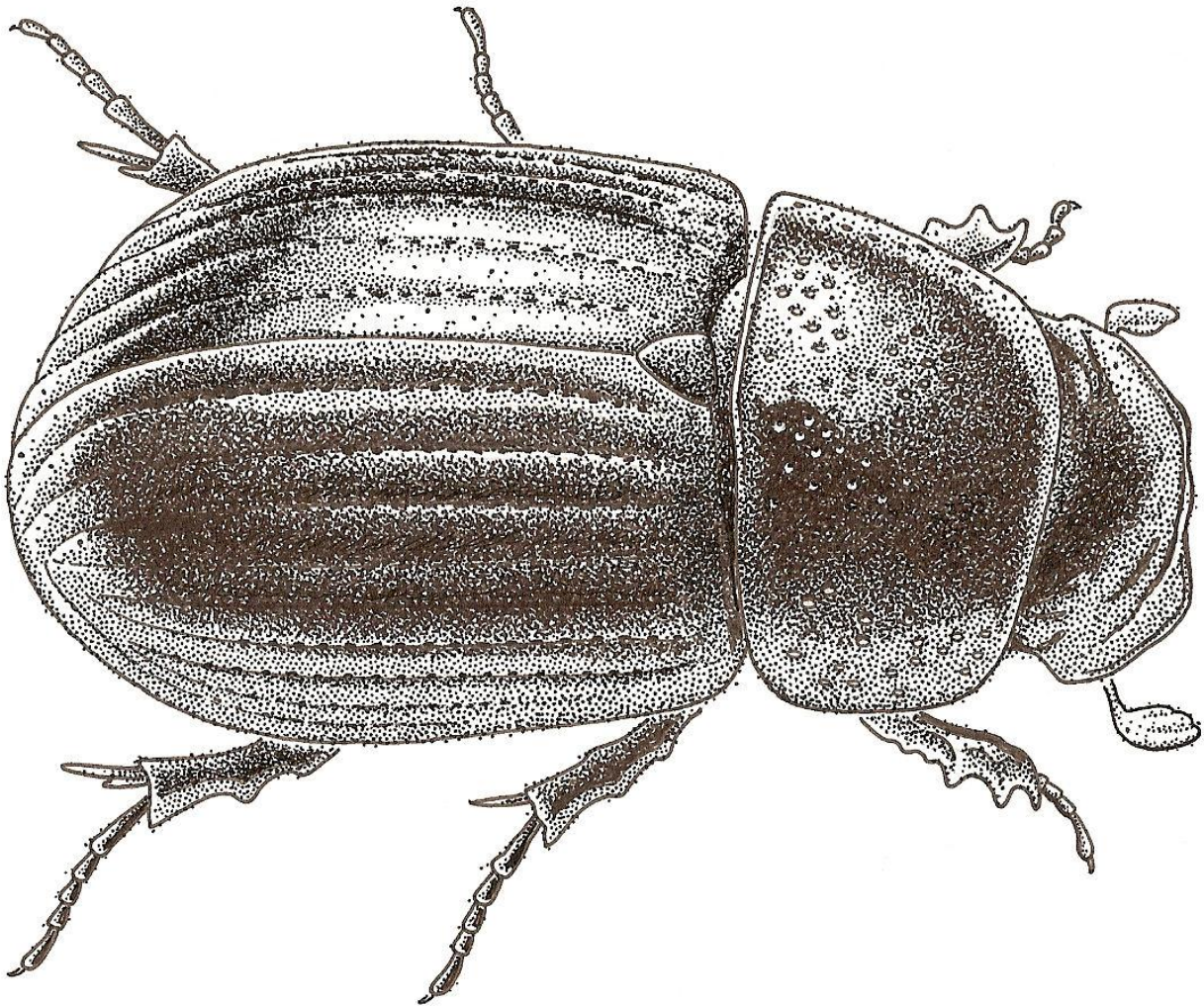


Fig. 29: *Aphodius (Ammonoecius) brevis*. Erichson Mapping pen and ink on Bristol Board

## *DRAWING WITH COLOURED PENCILS*

Coloured pencils have many advantages over other media and are my preferred technique for more ambitious habitus drawings.

### *DRAWING SURFACE*

A very good quality paper is essential for achieving the best results. The ideal is a fairly heavy (250 G.S.M or 90lb), acid free, brilliant white paper which has a vellum-like surface with very little “tooth”. “Stonehenge” manufactured by Legionpaper meets these requirements perfectly. It is made of 100% cotton and is manufactured in the U.S.A. Until recently it was not obtainable in the UK, but it is now available in the form of pads of 15 sheets (11” x 14” and 18” x 24”) from specialist art suppliers.

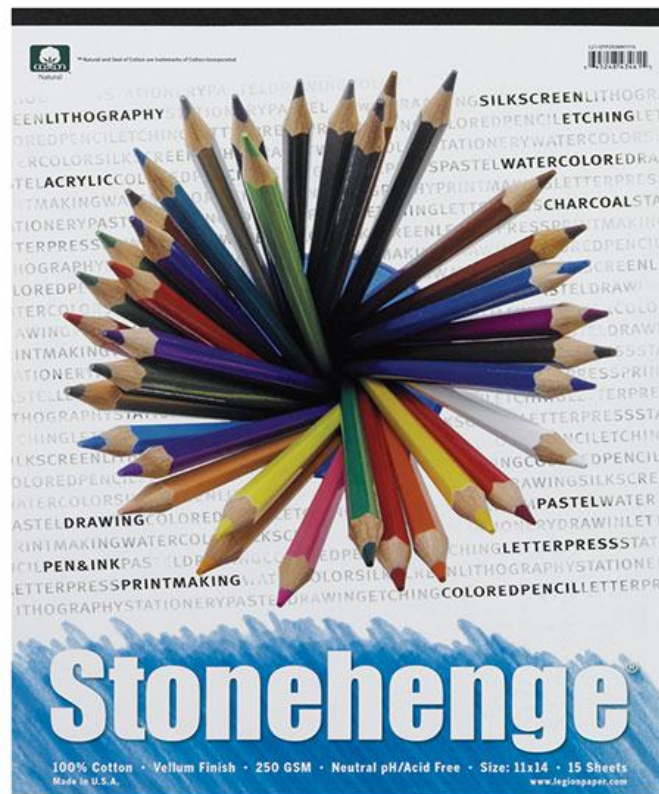


Fig. 30

### *THE COLOURED PENCILS*

There are several excellent brands of artist quality coloured pencils each of which has its own characteristic albeit subtly different properties. Some are waxier than others while some contain more pigment or give more luminosity with certain colours. Experience alone will give an appreciation of these differences. It is not necessary of course to stick to one brand in the same picture. I frequently mix them to achieve the desired result. The following are all very good: Faber Castell, Derwent, Staedtler.

### *TECHNIQUE*

The outline image is obtained in exactly the same way as described above for ink drawings.

I always sharpen my coloured pencils to a very fine point and resharpen them frequently in the course of working. Ordinary pencil sharpeners are quite inadequate for this as they do not give a fine enough point. I use a Swann Morton scalpel blade (size 11) or similar and finish the point with very fine abrasive paper.

The great advantage of coloured pencil is that you can achieve perfect gradations of tone (resembling airbrush work) and it is possible to blend one colour into another by careful shading. I work with a kind of stipple /scribble technique until I have the right density of colour. This may involve going over the same area several times and with more than one colour. In this way, it is possible to simulate those elusive iridescent sheens and metallic lustres which characterise many insects.

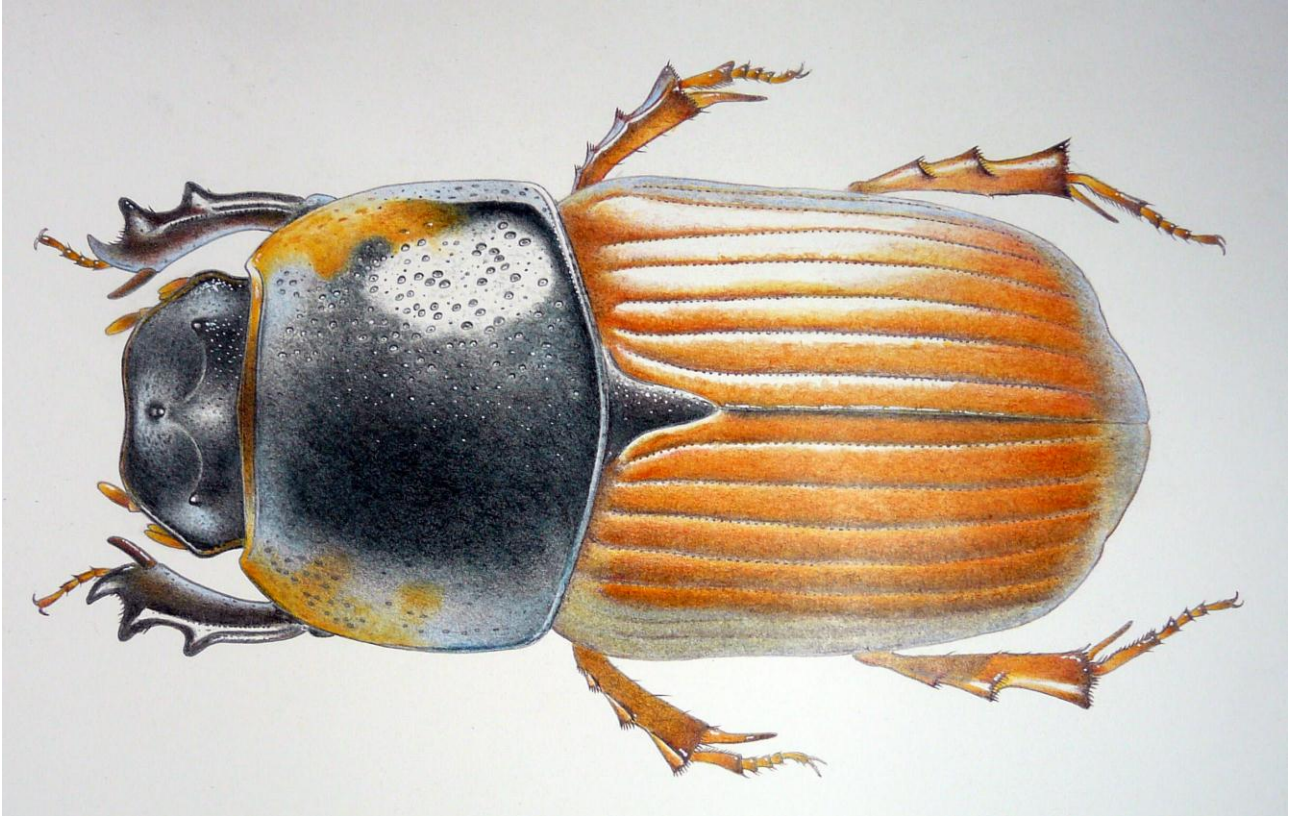


Fig. 31: *Aphodius scrutator* (Herbst)  
Coloured pencil on smooth surface heavyweight cartridge paper

### *BURNISHING*

A good coloured pencil drawing has a lithographic quality about it, with areas of deep colour and fine gradations of colour which would be very difficult to achieve using other media. The most luminous areas of colour are done by burnishing. This involves pressing the colour into the fabric of the paper with a white coloured pencil or a special hard neutral pencil called a 'burnisher'. This is where the Stonehenge paper comes into its own as the surface and texture is such that it will take a lot of working. Burnisher and Blender pencils are available, manufactured by Derwent, but a white coloured pencil gives much the same effect.

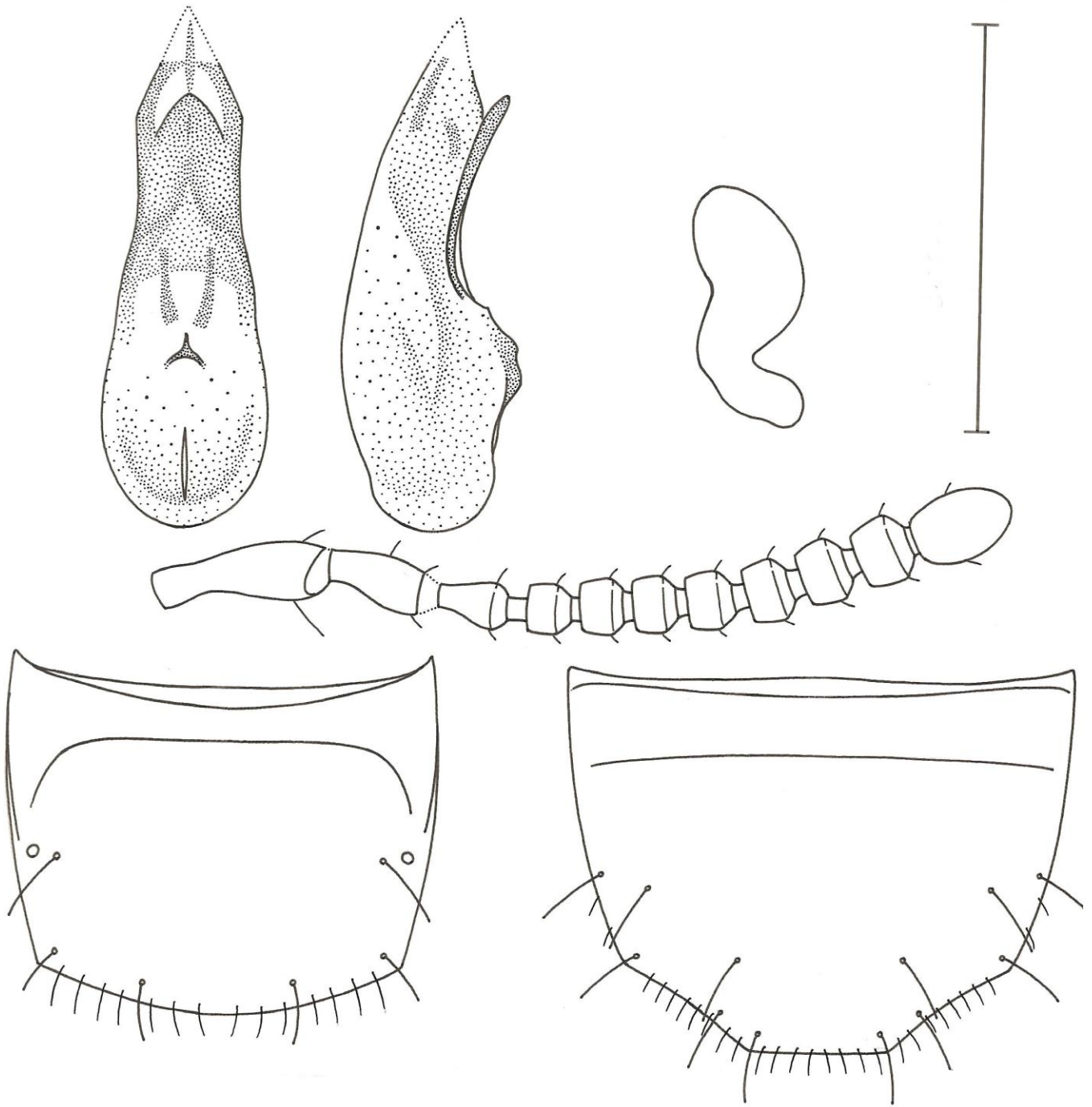


Fig. 32: *Tecturota (Pragensiella) marchii* (Doderò)  
Fibre tip and mapping pen and ink on Bristol Board  
(Interestingly, the aedeagus and spermatheca appear never to have been figured before).

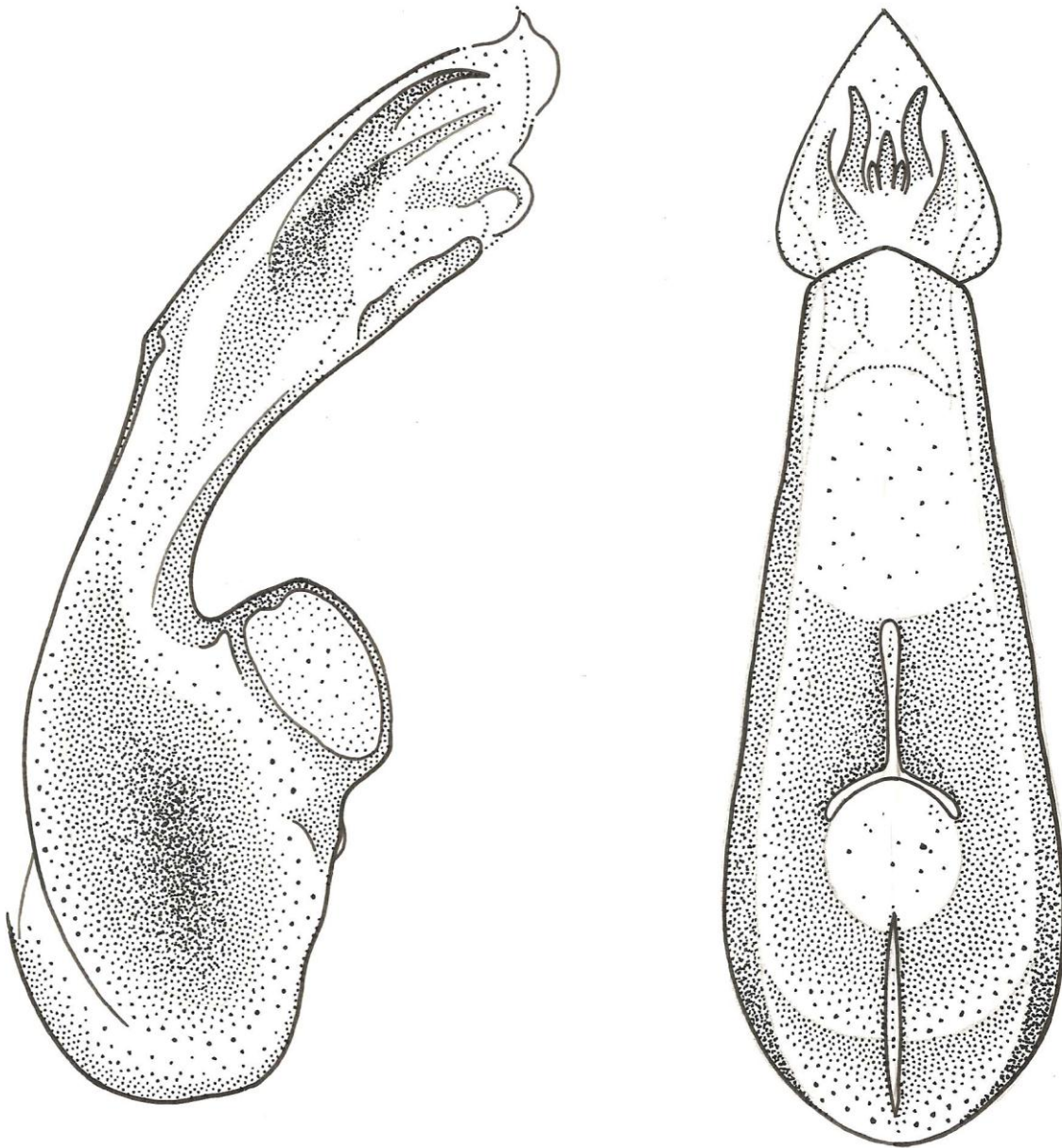


Fig. 33: *Oxypoda lurida* Wollaston – aedeagus. Fibre tip and mapping pen and ink on Bristol Board.

The images of aedeagi, spermathecae, antennae and sclerites in figures 32 and 33 were obtained using specimens prepared in clove oil and drawn with the aid of a drawing tube (or camera lucida) and a robust russian “Biolam” compound microscope.

## WORKING WITH WATERCOLOUR

My earliest illustrations of insects were done using watercolour. Winsor & Newton artists quality watercolours which come in small pans (not tubes), I find are the best.

The paper should be a heavy cartridge (100lb) with not too much tooth and it should be stretched by wetting and taping to a board to dry, with gummed tape. Illustration board such as CS2 obviates the need for stretching. Only the finest quality artists' sable brushes such as Winsor & Newton series 7 which retain a good point when working should be used.

The outline drawing is filled in with a combination of minute washes and stipples and finished with white gouache or body colour for the highlights and pubescence (if present).

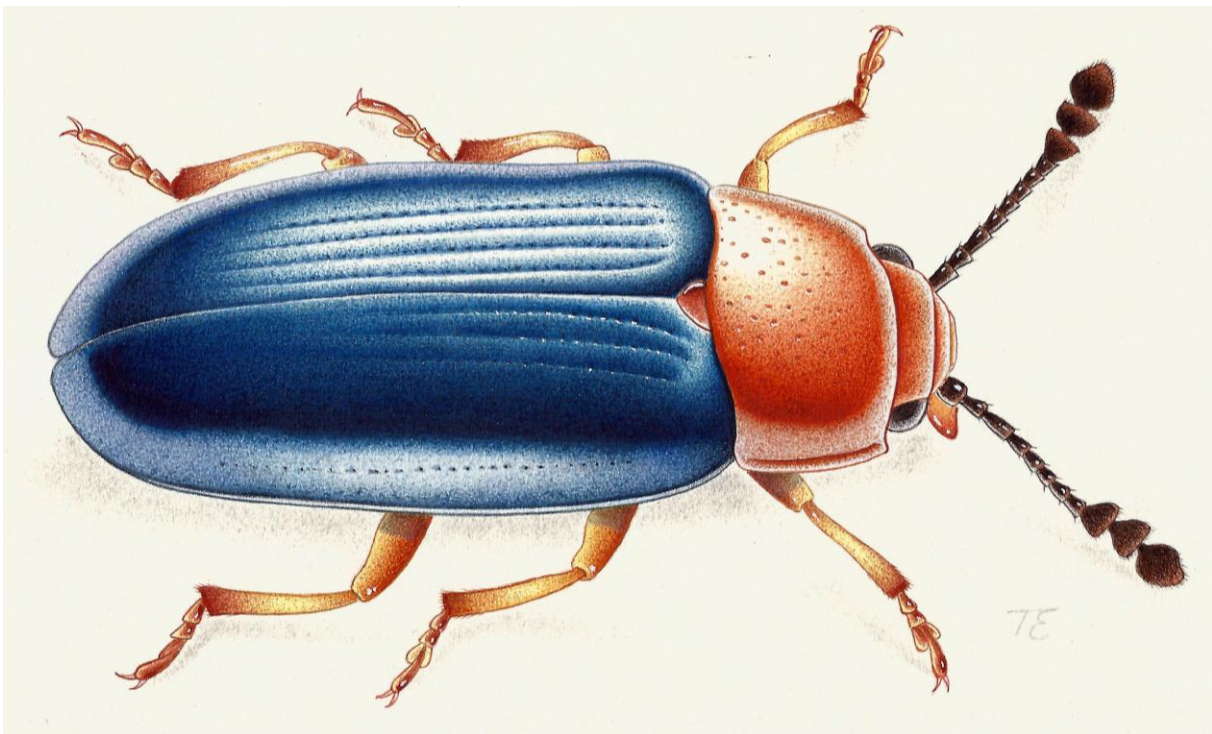


Fig. 34: *Triplax aenea* Sahlberg. Transparent watercolour on Illustration Board (CS2).

*Lebia chlorocephala*, (Fig. 35), a colourful rare carabid beetle which in its larval state is a parasitoid of chrysomelid beetles such as *Chrysolina staphylaea* or *Timarcha goettingensis*. The following and final drawing is from a specimen found in Cressbrook Dale in the Peak District, Derbyshire. The illustration is in coloured pencil with specular highlights picked out with white opaque ink using a “uni ball Signo” pen. The illumination is from the left, with ambient daylight lighting reflected in blue on the right of the beetle. The rendering of the iridescence of the elytra would have been difficult to achieve with other media.



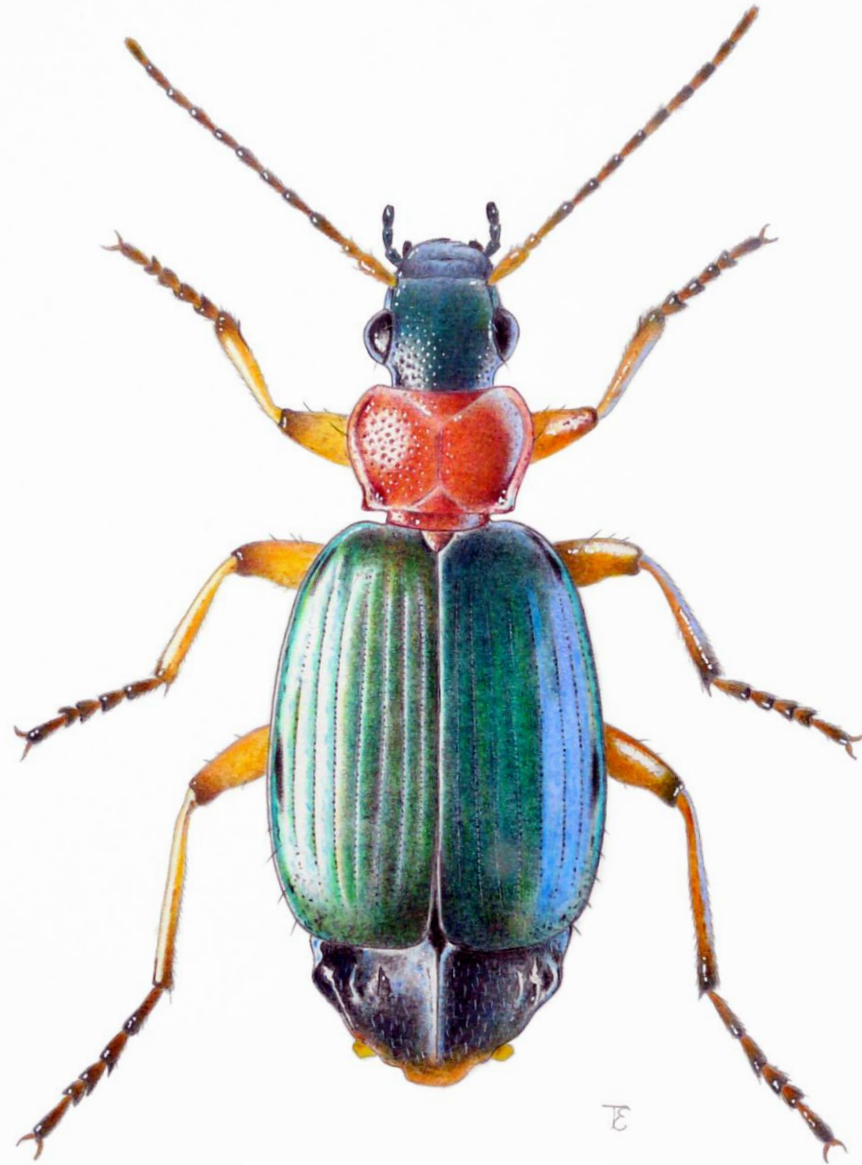


Fig. 35: *Lebia chlorocephala*

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