



Slater Museum of Natural History

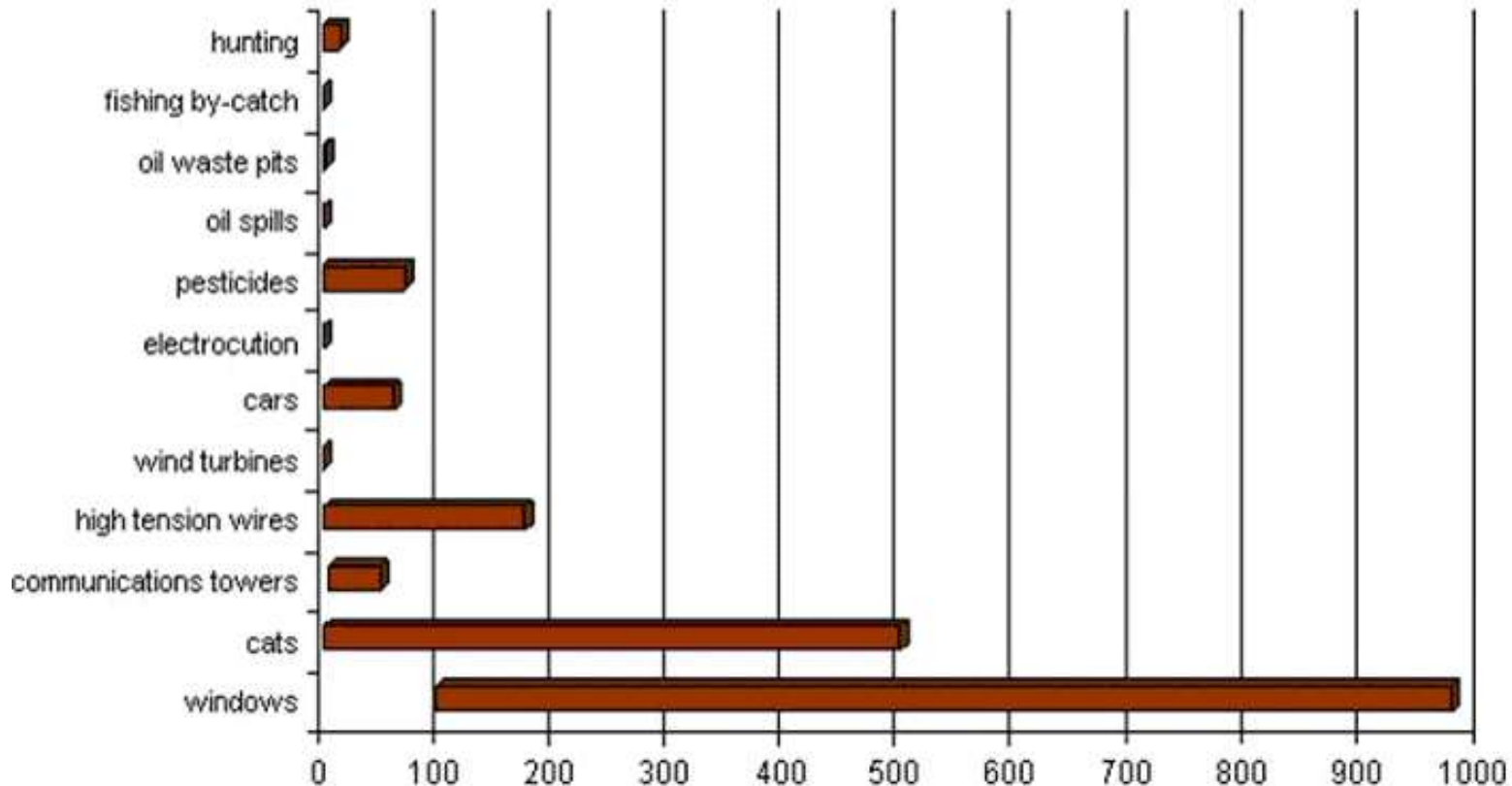
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Most of our birds are from salvage. The number incidentally killed by humans each year is astounding. (For instructions on saving and donating specimens see <http://www.pugetsound.edu/academics/academic-resources/slater-museum/giving-to-the-museum/>)

From Sibley Guides, Bird Mortality <http://www.sibleyguides.com/mortality.htm>

Estimated Annual Mortality (in millions of birds)





Check data, get data sheet, tag the bird with your prep number, file accession card. Break the humeri (wing bones) distal to the shoulder. Plug any holes, especially the throat and trachea if bloody or oozing.

Get oriented, find sternum and clear path for cutting. Incision will be on dotted line. Distal half of sternum is between forceps.





The cut, start at midpoint of sternum continue to cloaca.



Watch blood and juices, use sawdust liberally. Sawdust prevents blood and ooze from getting on the feathers. Clean your fingers with sawdust as you go.

Sawdusted



Lift skin from breast muscle and use forceps to separate the skin from the muscle.



After separating skin from muscle back to the cloaca, find the knee, which is at the point of forceps



The knee

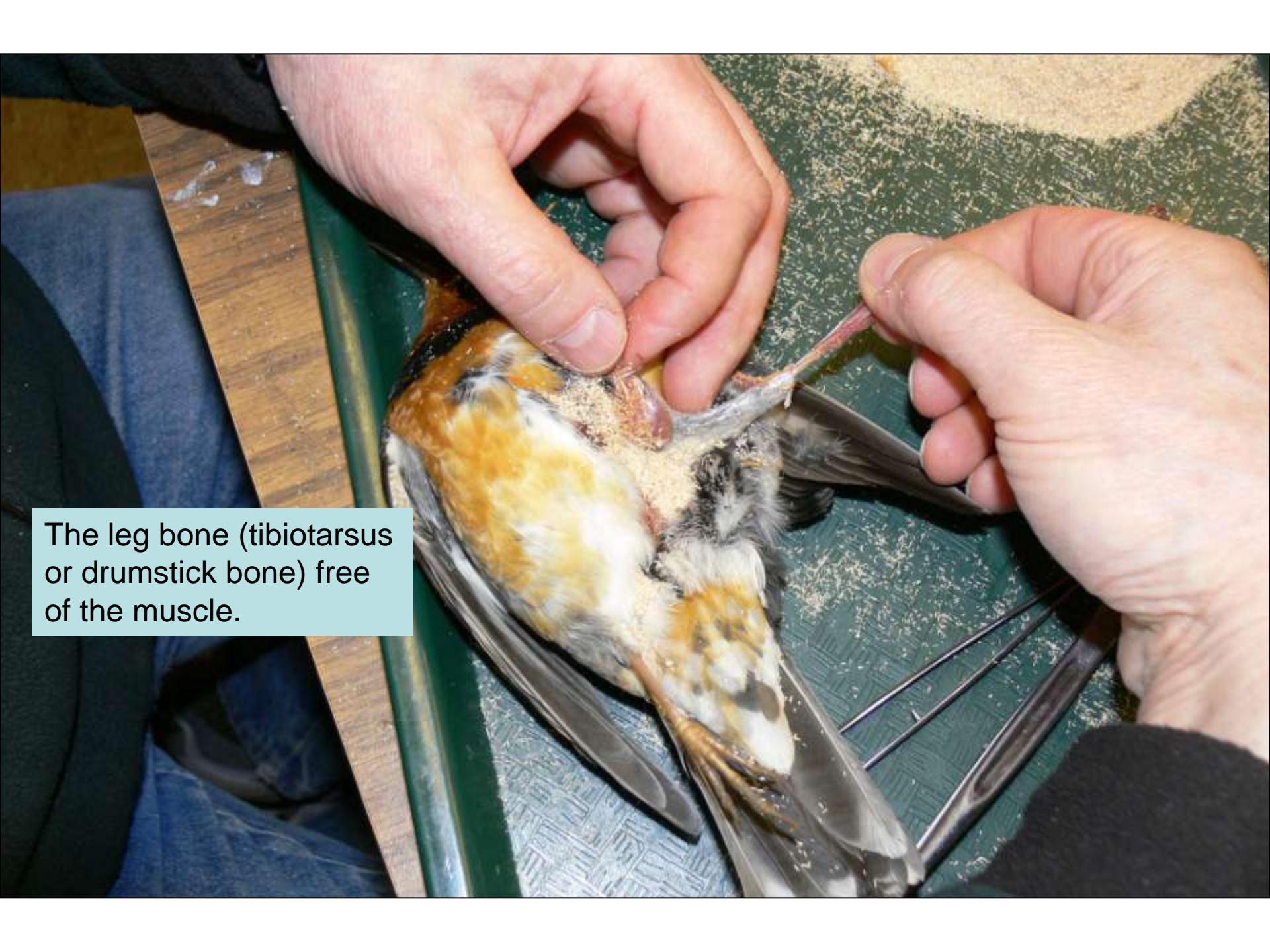


Snip leg bone just below (distal) to knee.





Push leg bone out through muscle by pushing from the ankle. Leg bone is out and held in my right thumb and forefinger. Pull muscle (drumstick) around to the front and snip ligaments & tendons free. A big time waster here is not pushing the leg bone out all the way and digging around in the muscle.



The leg bone (tibiotarsus or drumstick bone) free of the muscle.

Find other knee, snip,
and repeat extraction.



The other knee,
ready to snip



Push bone out by pushing from the ankle, pull muscle to front and snip the leg free.



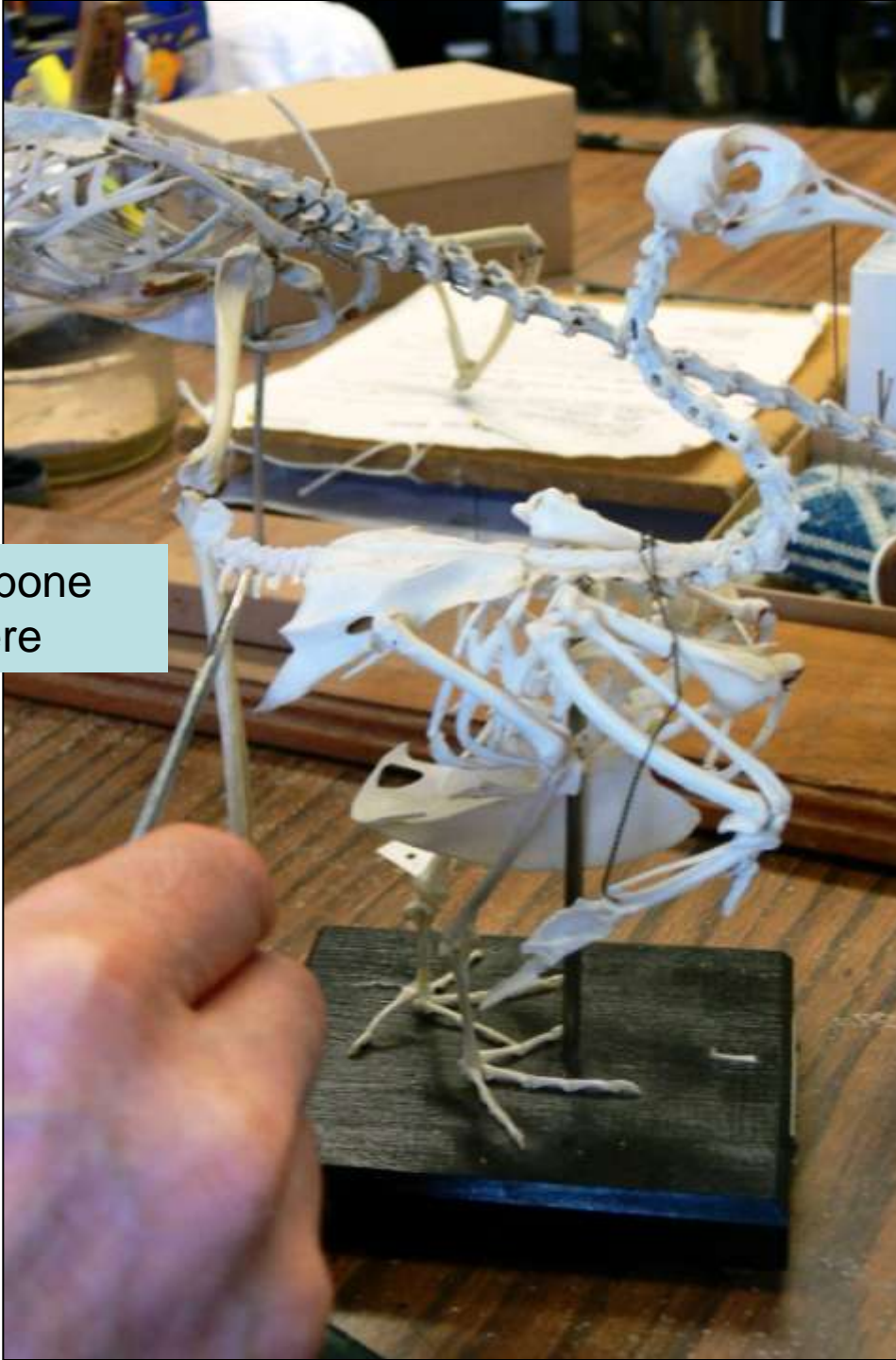
Both legs free



Freeing the tail – snip the tail bone, note thighs which will be you handles in going around the back



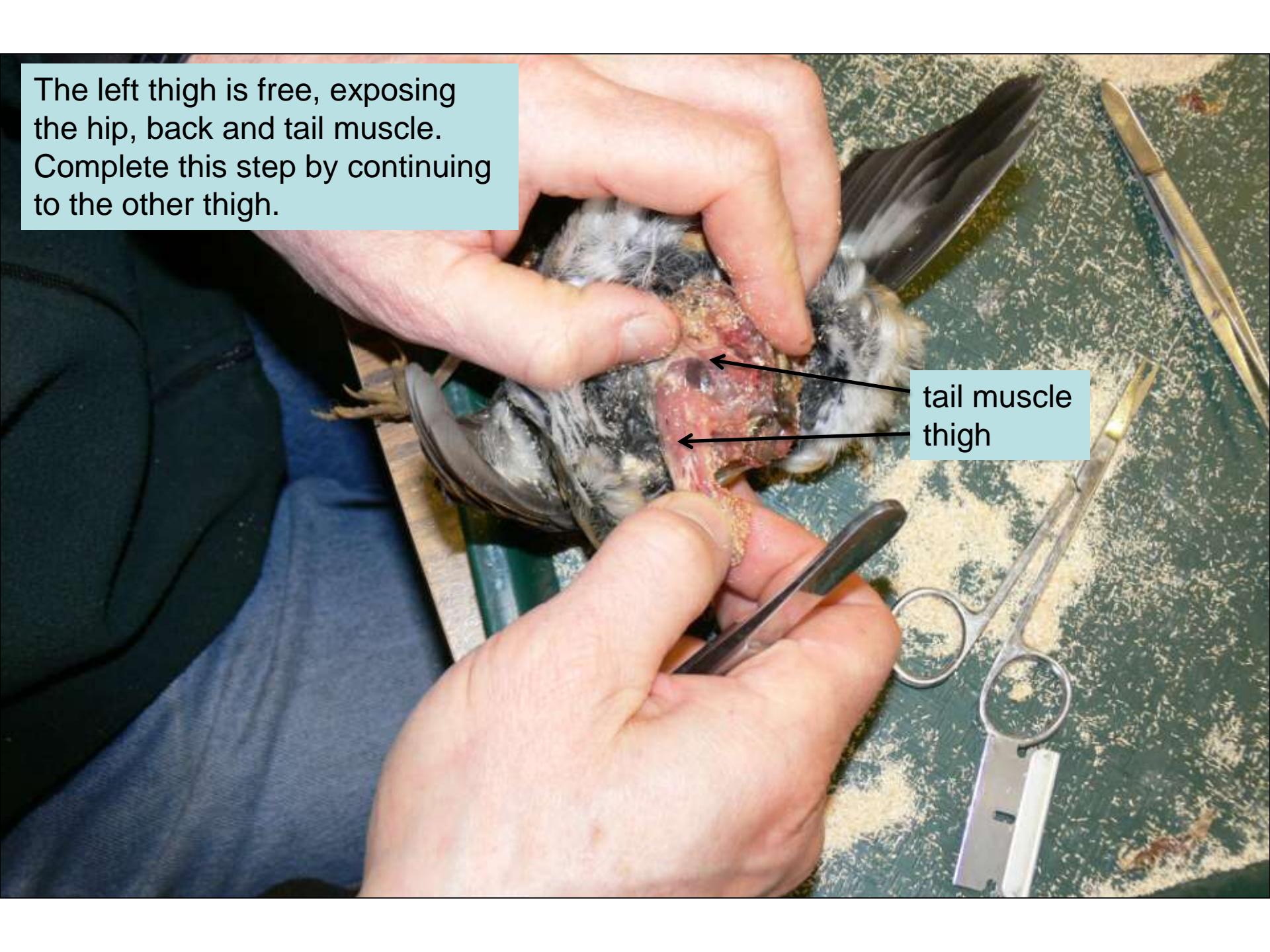
Cut tail bone
right there



Stand bird on furcula (chest), bend tail back, and work one thigh free (left thigh is in the forceps). I usually start with the left thigh. Tease and pull tissue away up to hip. With the tail bent back the tail muscle will be visible. Work through this onto back (synsacrum), through the cut tail bone and continuing around and over the back to the other thigh. Work the other thigh free.

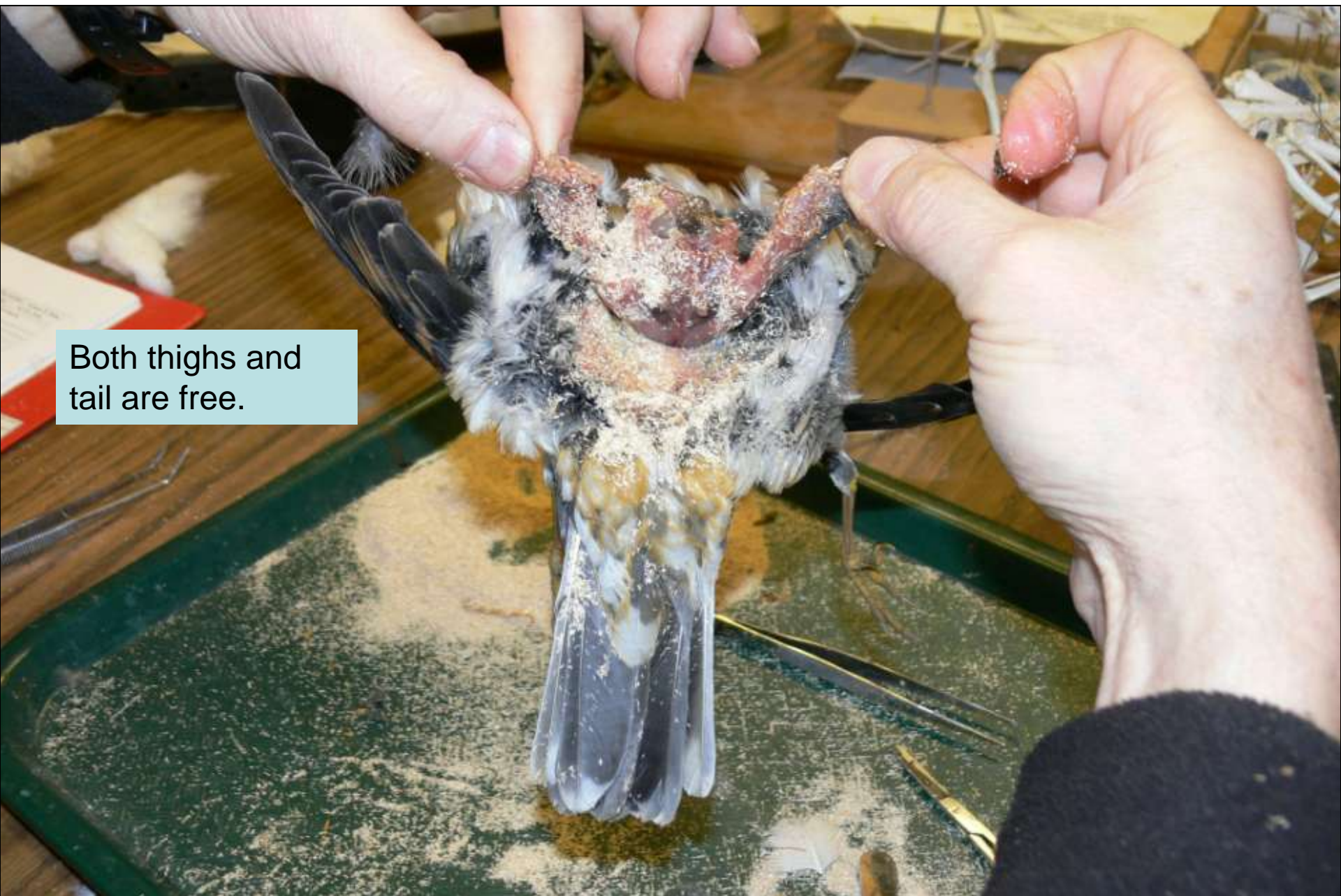


The left thigh is free, exposing the hip, back and tail muscle. Complete this step by continuing to the other thigh.



tail muscle
thigh

Both thighs and tail are free.



Pinch & pull skin up to wing pits (arm pits). Once free from the legs and tail the skin almost slides off up to wings.



Wings bones (humeri) were broken initially just distal to the shoulder joint to facilitate skinning. Once skinned to the wings, the remaining muscle is pinched free and neck is exposed to head.



Pinch & pull skin up over head.
Note that many ducks need to
have the head skinned through
the back of the neck. See
Chapin 1929 pdf on the Slater
website.



Head skinned to expose ear



With a pinch of sawdust for a grip, pinch and pull the ear lining out.



The ear lining pulled out



Continuing skinning beyond eyes



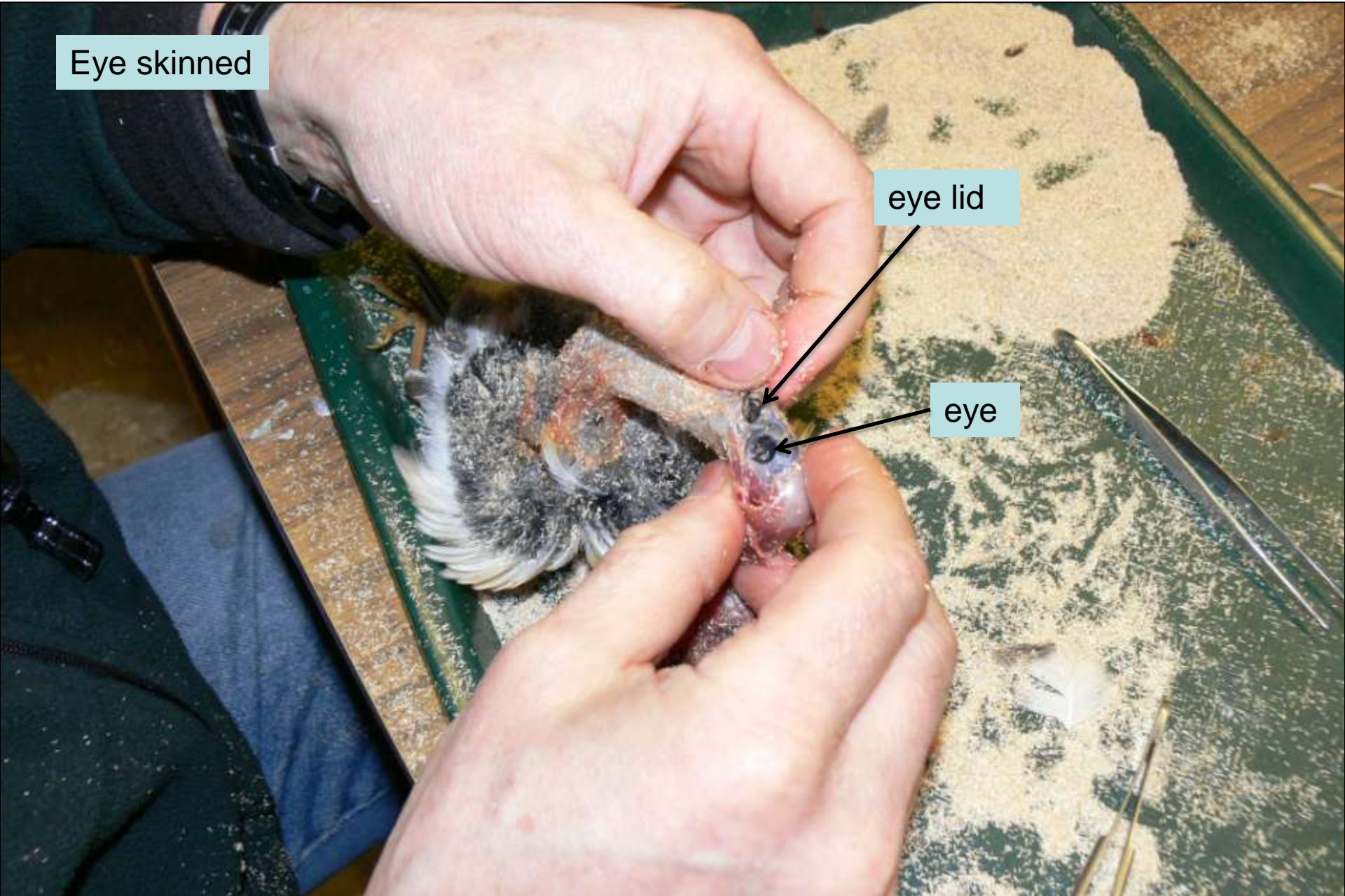
Carefully snip, tease, or tear the eye lid from the tissue or membrane attaching the skin to the eye. The cleaner the eye skin the easier it will be to insert cotton eyes.



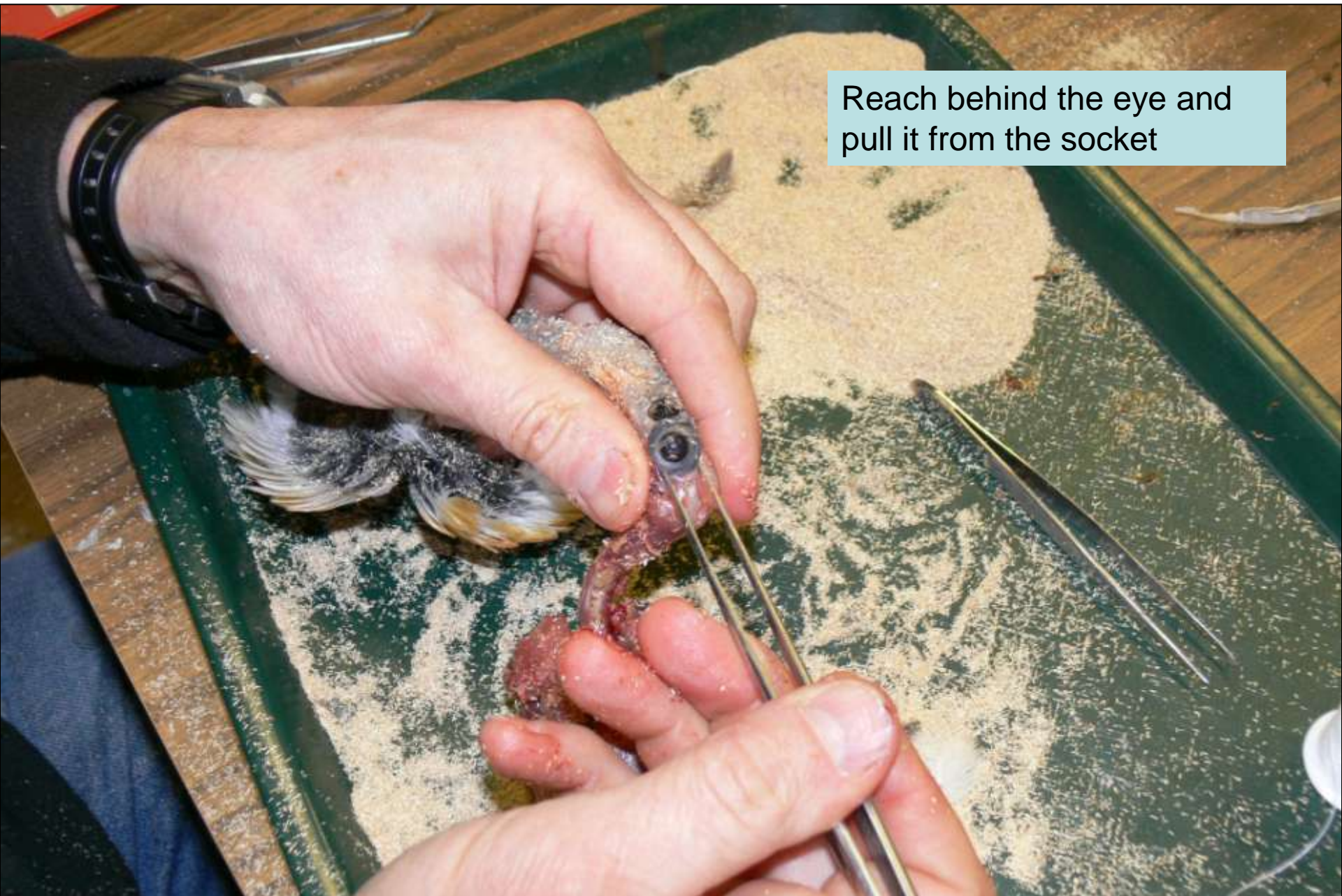
Eye skinned

eye lid

eye



Reach behind the eye and pull it from the socket



The extracted eye. Keep a few blue berries nearby to eat while doing demos. They look like eyes.



Blueberries, yum. This is a good point to inspect the skull (passerines only) for pneumatization (aka ossification) and record on datasheet.



Three cuts to free the head & brain from the skin. Cut 1 is up between the mandible, cutting through the palate, to inside the roof of the skull. See Chapin 1929 pdf on the Slater website for illustrations.



Cut 2 is from inside of the mandible to midpoint in the back of the skull. Cut 3 repeats on the other side.



The back of the skull pulls away. The brain here is mush. If it doesn't come out grab the brain by the membranes and extract it.



Clean the inside of the skull. Check that the back of eye sockets are cut away allowing insertion of eyes.



The body, set aside for sexing.



Check the skin for fat. Note fat and molt on your data sheet.





Scraping fat. Fat is often concentrated in the feather tracts. Use a blunt tool and sawdust to scrape and abrade the fat layer. A sharper tool is sometimes needed to break through to feather bases in feather tracts.

Note molting feather bases. This looks like adventitious molt – replacement of feathers lost accidentally as it is not symmetric.



The wings are skinned down to the elbow then partially on the radius (forearm). This allows removal of some muscle and clears the path for tying the wing together. On teaching specimens (stick birds) I usually do not strip the secondaries from the ulna.



The wings tied together. Leave the humeri on a stick (teaching) bird to support the wings. Cut humeri off at the elbow on a research specimen.



Turning the skin feather side out



Pinch the skull together at the jaw to minimize strain on the skin as you push the head back through the neck



Feather side out



Spot clean blood and ooze



Water and sawdust are often all that is needed. For dirty or fat birds, wash them in water with Dawn and dry. Heat dries the feathers and an air hose fluffs them. Use a tooth brush to tap the feathers while drying if air is not available.

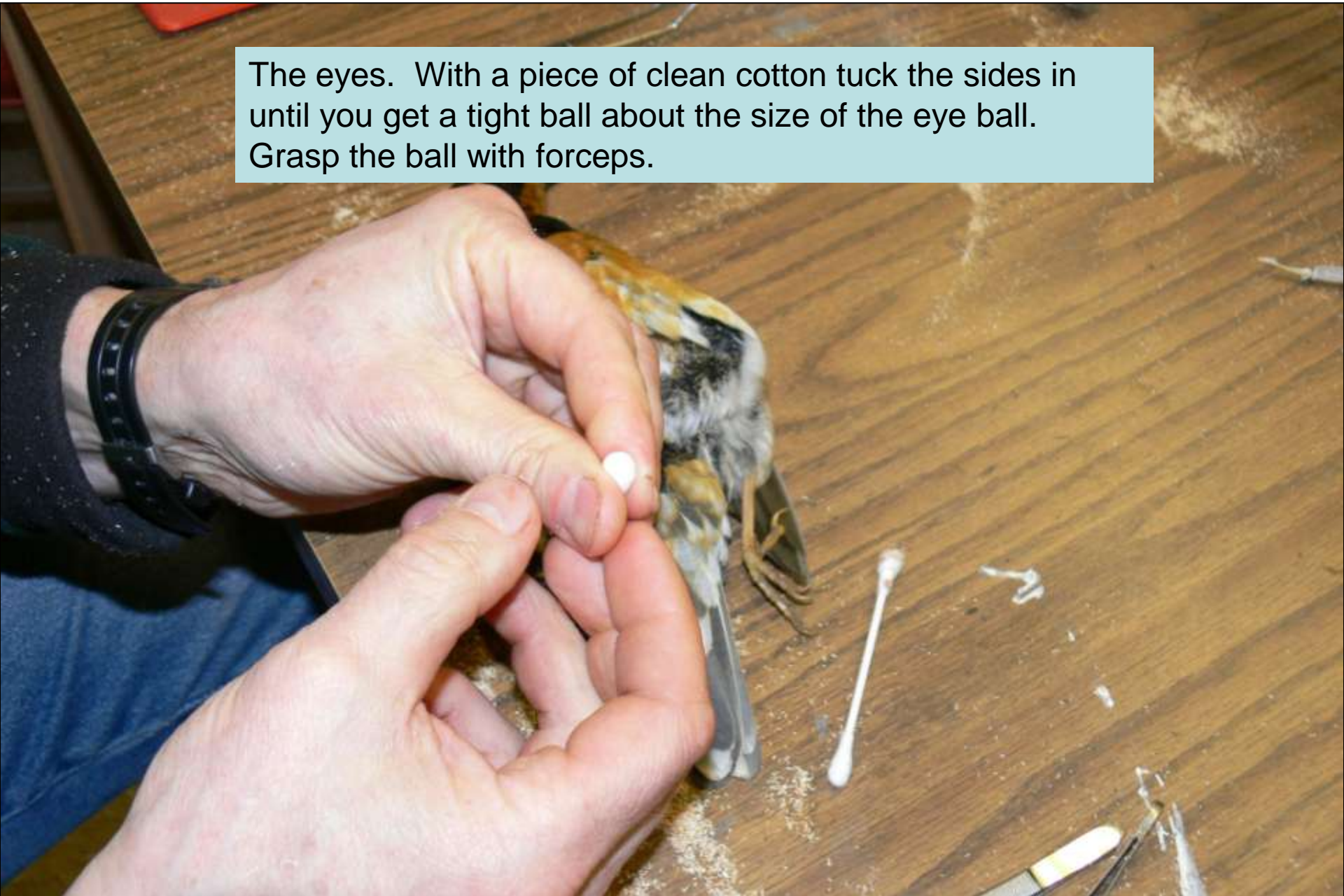


Use a minimum of sawdust on owls and hawk to avoid clumping of down feathers.

Wrap cotton around the tibiotarsus (drumstick) using wisps of cotton. Using wisps avoids lumps.



The eyes. With a piece of clean cotton tuck the sides in until you get a tight ball about the size of the eye ball. Grasp the ball with forceps.



Grasp the ball with forceps and don't let go until it is fitted in place



Fitting the eyeball in place. Tuck any skin back under the eye lid using a needle or pin. If the eye is dirty replace it until you get a clean white eye.



The other eye



Making the body. Start with the head. Wisp cotton onto a stick until it forms a ball about the size of the skull.



Then continue wisping cotton to form a spindle shaped body. Moisture helps to wind a tight body. Use just enough water to allow cotton to wind tightly.





Sizing. The final body will be about 2/3 the size of the original body.

Insert body, set the head on the cotton head and pull breast skin together over the cut.



The skin should close up
without stretching



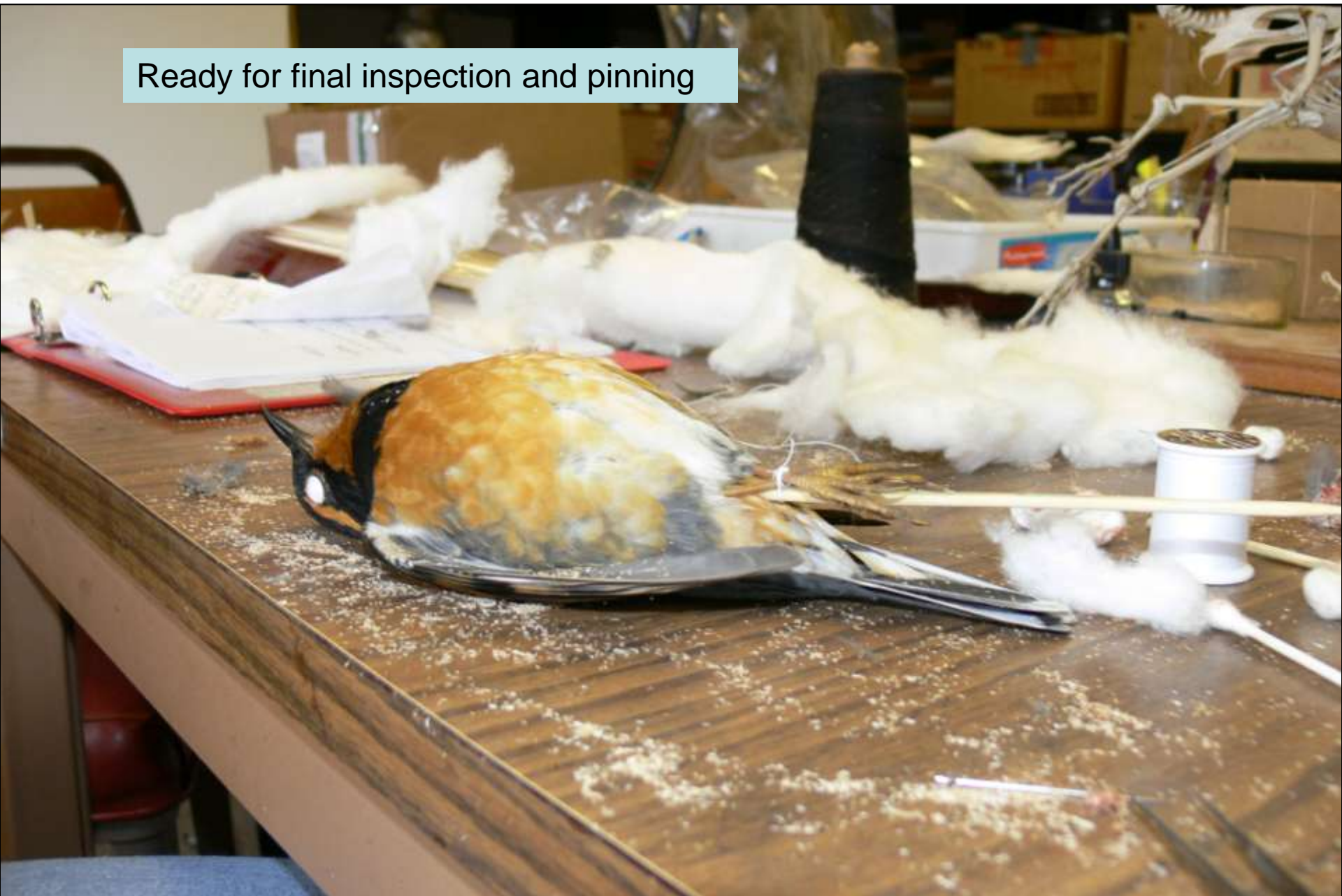
A few stitches hold the skin and feather tracts in place while the skin dries.



Tie the legs together and to the stick



Ready for final inspection and pinning



Flip and check the back and alignment of wings



Pin with a smoothing stroke along the wings from front to back.

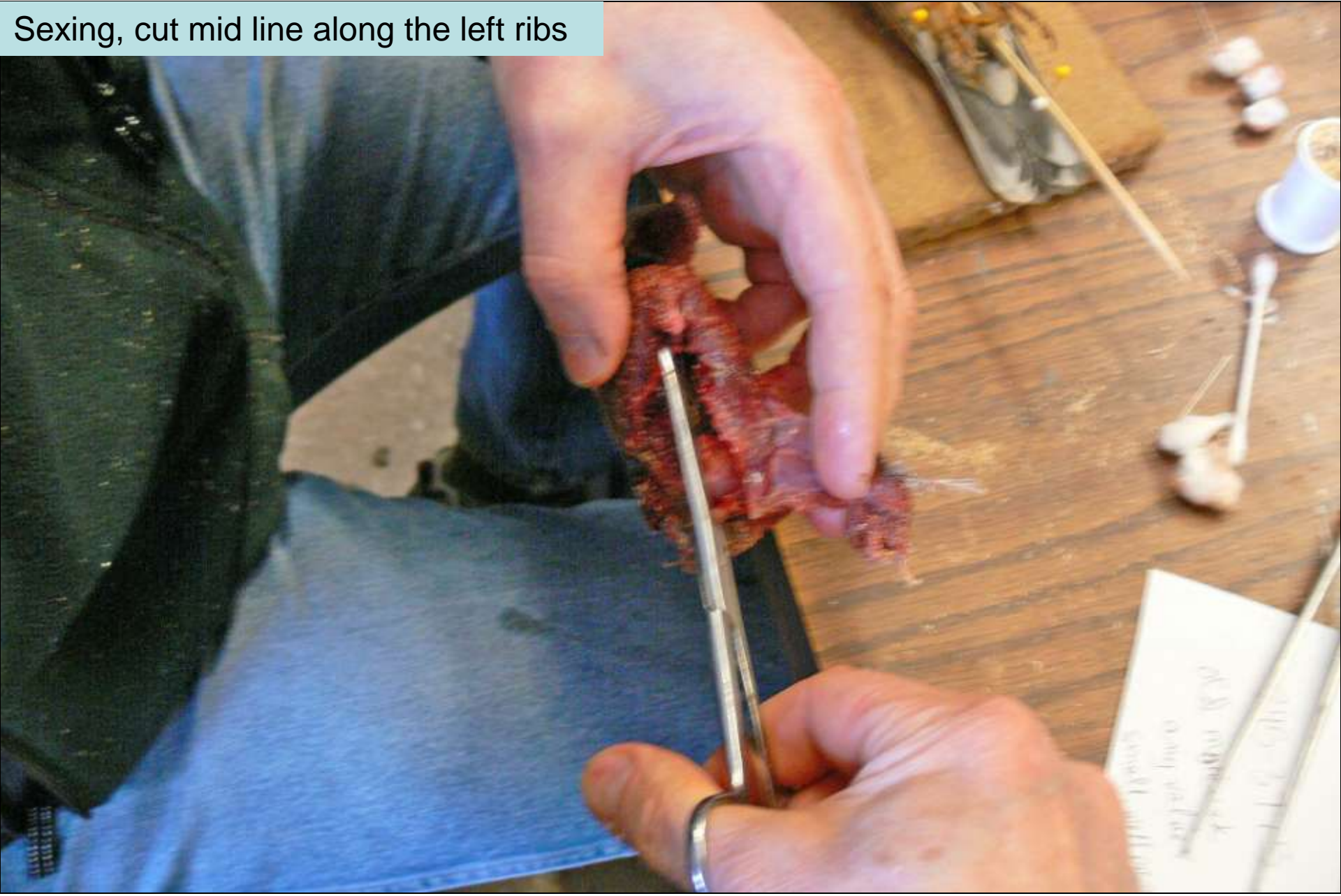


Ready for drying



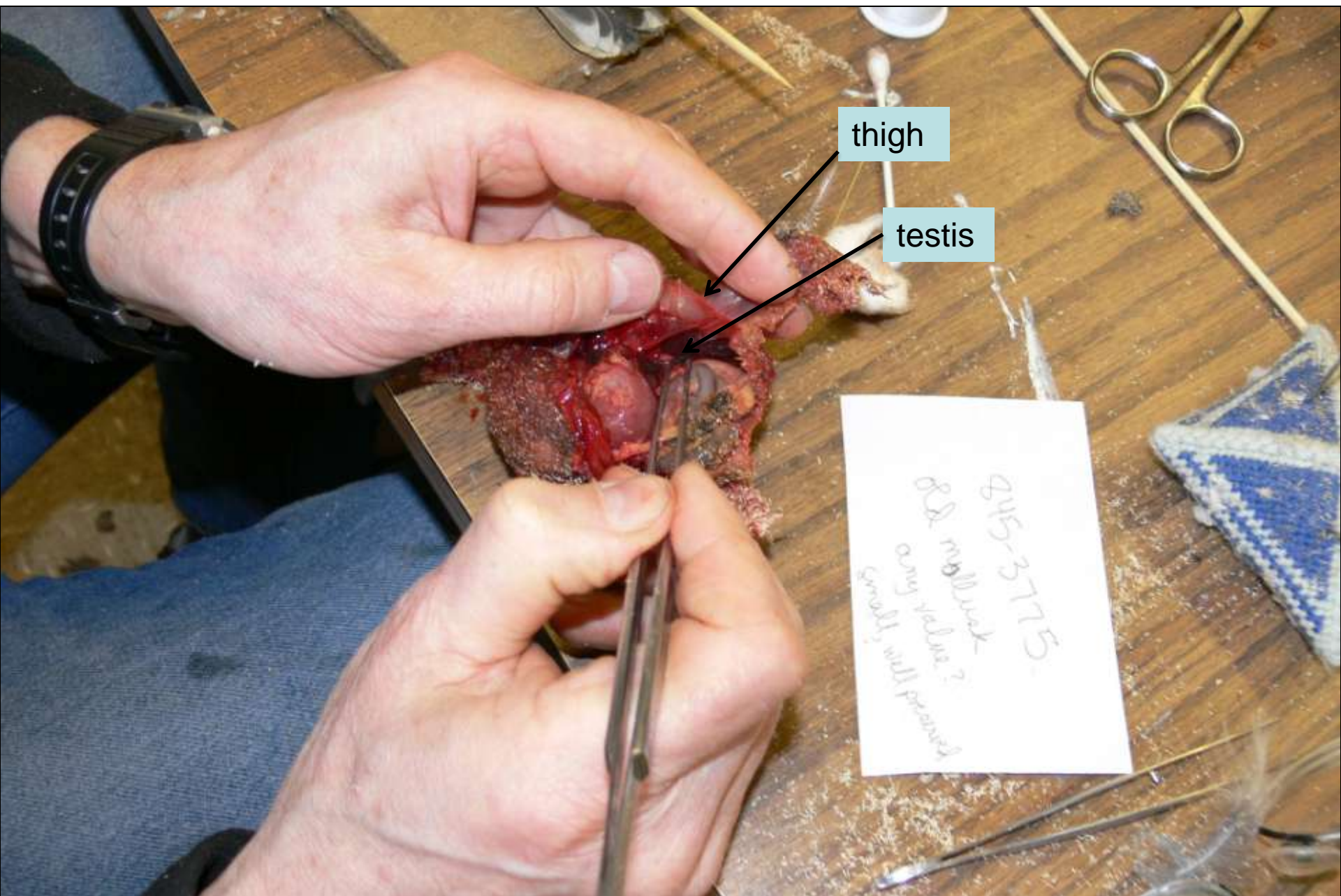


Sexing, cut mid line along the left ribs



Open the body, the gonads are directly below and inside the body cavity at the point of attachment of the thigh to the back.





thigh

testis

245-3-175
D. muller
any value?
grand, well preserved

How to Tie a Square Knot and Granny Knot:



1. For tying both the square knot and the granny knot, the first step is twist two ropes together.

Right over left --

2. Square Knot -- left over right, under then through.



3. Square Knot -- When pulled tight, the strands from the same rope come back out of the knot together, in the same direction.



2. Granny Knot -- right over left, under then through.



3. Granny Knot -- When pulled tight, the strands from the same rope come out of the knot on different sides.



Clove hitch, crossing knot, or double half hitch – use to tie wing to the wing stick. This knot allows adjustments to skin/spread wing preparations.



Use the square knot for tying tags to the leg.