

THE UNICOT METHOD

simple path perfect straight razor edge

Coticules are versatile whetstones. When used with a abrasive slurry, they provide ample steel removal. Yet when used with water only, they lend a unique quality to the edge of a razor, by many appreciated for its great shaving performance, combined with unrivaled skin friendliness. The biggest challenge for sharpening with nothing only a Coticule, is found in bridging the gap between the keenness left by use of slurry and the keenness required to successfully finish the edge with only use of water on the hone's surface. The Unicot approach provides an elegant solution for tackling this challenge. It is a simple procedure that doesn't depend upon often difficult to interpret tests, yet it is important to follow the protocol closely.



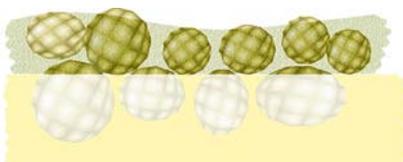
At large magnification: a spessartine crystal, also called "garnet". These are the abrasive particles that give Coticules their unique properties.

Requirements

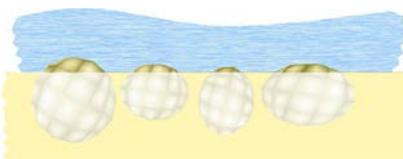
1. Straight razor (in good condition with no visible damage to the edge or abnormal/excessive hone wear)
2. Serviceable Coticule (lapped with chamfered sides)
3. Slurry Stone
4. Cup or bowl of water
5. Electrical insulation tape (0.15mm thickness)
6. Glass jar, beer bottle, or similar

Before you start! Read: «The various strokes used for razor sharpening»

Procedure



Magnified representation of garnets in slurry.

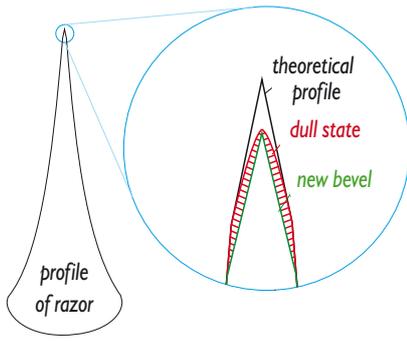


Magnified representation of garnets, embedded in the surface of the hone, when used with water only.

Step 1. If the razor can shave arm hair, using only the weight of the razor, run the length of the edge over the bottom of the glass jar until it can no longer shave arm hair (at skin level).

Step 2. Sprinkle some water on the Coticule, and rub it with the slurry stone, raising a slurry with a milky consistency. Add a few drop of water if the slurry turns out denser than that.

Step 3. With the razor on the Coticule, place your index finger on the middle of the blade near the spine and perform diagonal strokes forth and back over the surface of the Coticule. The razor remains on good contact with the hone at all time.



Steel reduction during the reestablishment of flat bevel planes (crosshatched in red).

Perform 30 of these strokes, flip the razor over its spine and repeat at the other side. You have now performed one full set of 30 «halfstrokes». Check to see if the razor can shave arm hair at skin level, and repeat the above procedure until it can do so along the entire length of the cutting edge.

It may take 2 - 20 sets, but you cannot move to the next step until the bevel is capable of shaving arm hair. If this takes a lot of work, monitor the bevels ensuring that they remain even. If one is wider than the other, modify your lap count in favor of the narrower side.

The supporting index finger can be placed strategically to assist here as well, or to promote the development of edge parts that stay behind. On a thin, flexible blade, move the finger around toe avoid uneven hone wear.

Step 4. Rinse the Coticule and refresh the slurry making it slightly thinner than before. Perform 30 standard X-Strokes. Make them as steady and perfect as possible.

Note: This lap count is based on a typical 150 x 40 mm Coticule. If the Coticule is longer or shorter, adjust accordingly.

Step 5. Rinse the razor and dry it carefully. Symmetrically apply electrical insulation tape on the length of the spine. Do not rinse the Coticule, but add a small splash of clear water leaving the slurry quite watery. Perform 30 standard X-strokes.

Step 6. Completely rinse the Coticule and razor, and sprinkle clean water atop the Coticule. Finish with 50 standard X-strokes on water only.

Thoroughly dry the razor using a piece of tissue paying careful attention not to damage the edge.

Step 7. Strop the razor using light pressure on a reasonably taut strop (60 laps on clean linen followed by 60 laps on clean leather). Use only enough pressure to feel a light sensation of friction.

Elucidation:

Pre-dulling

Although counterintuitive, dulling the edge prior to honing serves two valuable purposes.

First, the edge geometry of a razor's edge dictates both bevel

faces be completely flat, meeting at a “V” before the edge can be refined to a comfortable shaving keenness. Pre-dulling the edge takes all of the guesswork out of the process. Razors often have convex bevels, but they may still shave arm hair. In order to improve the keenness of such a razor, their bevels need to be restored to a completely flat condition. By dulling the edge on glass, you can be assured that the bevels are completely flat, ready to be developed, when it can shave arm hair again.

A secondary benefit of pre-dulling your razor is all the small blemishes, accumulated by edge deterioration over time and use, will be gone. Our new edge will live in fresh, «uncompromised» steel.

Tape

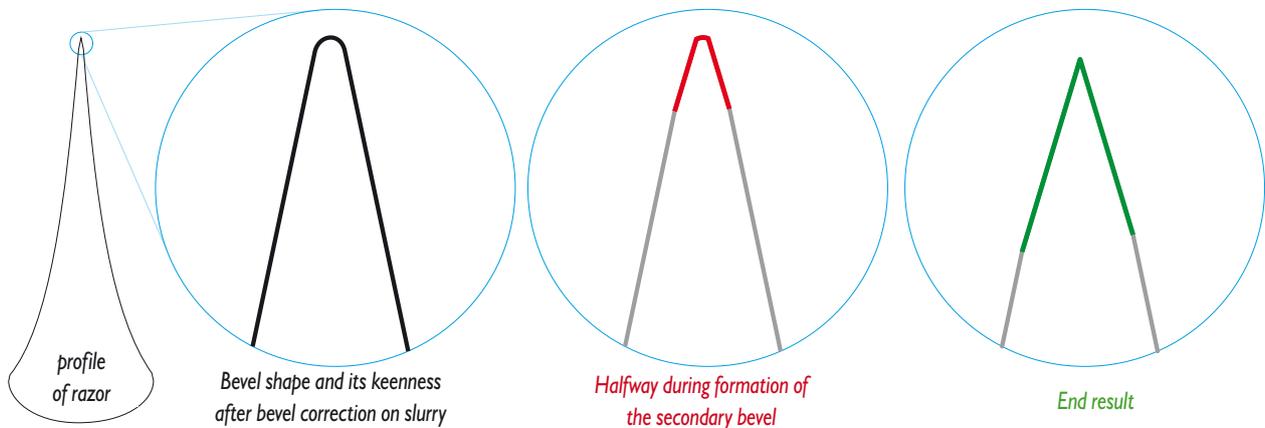
Another seemingly counterintuitive aspect of this system is the application of tape halfway through the process. This, however, is the cornerstone of the Unicot method. Slurry on a Coticule abrades steel with ample speed, but it is concurrently detrimental to the extremely fine tip of the edge. Sharpening occurs when steel is removed from the razor’s bevel faces, but the impact of the tip with the abrasive garnets in the slurry has a rounding effect. The keener and delicate the edge, the more it becomes affected by the collision with the garnets. At a certain level of keenness, the dulling effect neutralizes the sharpening effect. At that point no amount of honing on slurry will ever improve the edge.

With only water atop the Coticule, the garnets stay embedded in the surface of the hone, only slightly protruding above the surface. When honing, they quickly lose their “bite”. With little, or no, fresh garnet release to rejuvenate the hone’s cutting ability, it becomes a slow, shallow polisher with only very limited capacity for further bevel refinement. This phenomenon accounts for the challenge referenced in the preface.

The edge left by slurry is simply not ready for finishing on water. A solution for this problem can be found in the careful dilution of the slurry while continuously honing, according to the principles of the Dilucot method, of which the success depends greatly on feel and experience.

The Unicot method solves the situation by simply thickening the razor’s spine with of a layer of tape. As a result the razor ever so slightly tips over on its very edge which allows the Coticule to work on a narrow, newly developing, secondary bevel. Due too its narrow state, the amount of steel removal

required for a sharpening effect decreases exponentially, while the augmented relative pressure facilitates that steel removal greatly. This allows the Coticule in water only mode to both polish and refine at the same time.



Graphical representation of the Unicot method. After correcting the primary bevel shape, a secondary bevel perfects the end result.

Edge maintenance.

Because of the small cutting bevel, a Coticule with water is very effective for touching up the razor. This is best done at the earliest signs of edge deterioration (30 laps should suffice). Obviously, tape must be reapplied for this task. With each touch-up the secondary bevel grows a bit wider, until we reach the point where the Coticule with only water will no longer offer adequate sharpening puissance. This is easily remedied by some work without tape, which allows the initial bevel to grow in favor of the secondary bevel that has no choice but to diminish. About 30 laps on slurry should bring the secondary bevel within reach of the Coticule with water again.

