

Ebony, the Dark Knight of Details

Small doses
can do big things
for your furniture

BY GARRETT HACK



Photos, this page: Dean Powell (top left);
Dean Palmer (center left), Roger Heitzman (bottom right)

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When I saw my first ebony tree in Java more than 30 years ago, I was stunned by its small stature. In a climate where trees grow year-round, this 90-year-old was about 11 in. in diameter. Such stunningly slow growth helps explain ebony's extreme density, why typical boards are so small, and why the wood is so valuable that it's sometimes sold by the pound.

There are more than 450 species of ebony, mostly found in the tropics. All species are endangered, and you should be mindful that what you purchase is certified to have been harvested legally, to ensure its sustainability. A certified board will have a detailed chain of ownership, from its source all the way through the milling process to the sale.

In my woodworking I've used three types of ebony: Gabon (*Diospyros crassiflora*), Macassar (*Diospyros celebica*), and Mun (*Diospyros mun*). Unfortunately, Mun is no longer being exported, at least legally. Each is stunning, very expensive (expect to pay \$35 to \$85 a board foot), and hard to find. Veneer is a more economical option, but you should still expect to pay about \$9 to \$24 per square foot, depending on the width and thickness of the sheets.

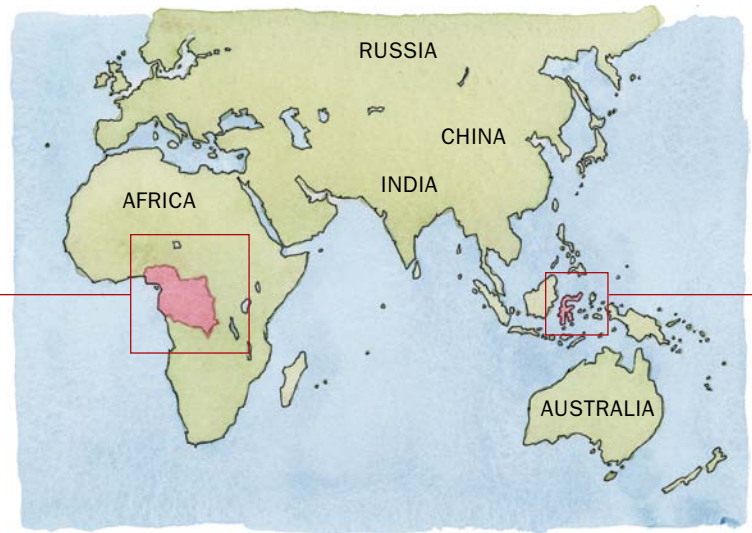
Go lightly on the machines

To avoid wasting any of the ebony, I tend to use the bandsaw, handsaws, and handplanes to cut pieces to size, rather than the tablesaw or jointer. I've never sent ebony through a planer for fear of it blowing up, quickly dulling my blades, or both. I will occasionally use the jointer to straighten an irregular edge. I've also turned ebony, with beautiful results, as the material is able to take the finest detail.

Hand-shaping the wood requires sharp tools and some finesse. When planing the long grain, fine tearout is common because of ebony's hardness and interlocking grain. I've had success with both standard and high bevel angles. Just start with a super-sharp blade and expect to resharpen frequently. For best results, set the plane for a fine cut, with a tight throat. I clean up any fine tearout with a scraper.

When working end grain in these brittle woods, chipout is common, so I prefer to use a low-angle plane, taking a light cut with a tight throat and skewing the plane acutely.

To shape the material, I often use scratch stocks and sand occasionally. Though carbide router bits work, I avoid using a router with ebony because it creates more dust (a problem for some) and



Gabon works small wonders

Gabon, or African, ebony is mostly available in small sizes, but with its jet-black color, a little goes a long way. This rare beauty is somewhat brittle, but the texture is very consistent, with almost no visible growth rings. It machines well and planes smoothly, but your tools have to be sharp, because the wood can be prone to tearout. Gabon's bold color never fades and the wood is very stable, making it ideal for inlay, beads, pulls, knobs, and edging.



Make bold statements with Macassar

Quite unlike its African cousin, Macassar ebony has rich brown and black striping (mostly in quartersawn faces). A favorite of the Art Deco designer E.J. Ruhlmann, the wood's grain can vary from widely spaced to so tight it appears almost all black. It's not as brittle as Gabon and can be found in somewhat longer and wider sizes. Surfaces can be hard to plane smooth, but they scrape wonderfully. Macassar's grain patterns make it well-suited to larger surfaces, such as drawer and door fronts, but it's also suitable for cabinet and table feet.



Tricks for working with ebony

Thin blades save material. To get the most yield from the rough ebony chunks, in this case Macassar, Hack uses a bandsaw. He flattens the slices with handplanes and returns to the saw later to cut parts to size, though sometimes he uses fine handsaws to cut smaller parts.



tends to produce clunky profiles. For other shapes, say for pulls and finials, you can use rasps and files.

The black dust migrates, so sand before assembly

The dust created while sanding ebony can foul mating surfaces. For the bandings and inlays I make of holly and ebony, bold and bright contrast is my goal. In my experience, sanding to level them after they're glued in turns the holly gray. Planing and scraping cuts the cleanest and preserves the sharp contrast I'm after. With any ebony element, sand before assembly if at all possible.

Though ebony has a reputation for being highly toxic to some people, I have not had issues with it.

It's surprisingly bendable

Despite ebony's toughness, it actually bends well, when both steaming and laminating. To make bent-laminations easier I cut the plies thinner than I normally would, closer to $\frac{1}{16}$ in. thick than $\frac{1}{8}$ in.

Scuff before gluing

Both Gabon and Macassar ebonies contain oils that can migrate to the surface and can ruin a glue bond. To avoid problems, I glue parts right after they've been handplaned, and I scuff the freshly planed surfaces with 220-grit paper. I'll even wipe parts with acetone to remove any oil that's built up on the surface.

It deserves a shine

When it comes to finishing ebony, I've had great success with shellac and oil/varnish. Being both dark and naturally shiny, ebony shows defects easily, so careful surface prep is a must. Regardless of the finish you choose, build up enough coats to make the prized ebony stand out. Using no finish is an option, too, but be sure to burnish the wood to a high polish with shavings. □

Garrett Hack is a contributing editor.



Plane to thickness. When thickening small ebony parts, Hack prefers hand over machine. He often uses a jig to ensure that all parts are uniform. It's simply a piece of plywood with thin runners that the plane rides on. A brad in front works as a stop.



Shape with a scratch stock. Machines can cause wicked tearout on the brittle ebony, so Hack uses scratch stocks to shape the material. Here he shapes a bead applied to a door frame.



Keep the contrast. When bringing an ebony inlay flush to a surface, a sharp handplane or scraper is your best bet. Avoid sanding these elements, because it often embeds the fine black dust into the surrounding surfaces.

No shame in faking it

If you are troubled by true ebony's sustainability, or its pricetag, ebonizing a less-expensive, more common wood is a great alternative. Use water-soluble aniline dye powder to transform common woods into jet-black faux Gabon ebony. Finish it well, and it's hard to tell it isn't the real thing. Woods that mimic Gabon well are rift- or plain-sawn cherry and pear, and to some extent walnut. And you might want to try ebonizing oak or ash, where the grain remains dominant, but turns deep black. Any surface to be ebonized must be carefully prepped beforehand, sanding,

raising the grain, and sanding again (up to 320 grit) until it is polished. Ebonizing is only skin deep and you can sand, plane, or scrape through it if you're not careful. So it is not appropriate for fans or inlays, nor small beads or other small moldings that will be planed, scraped, or shaped after installation. Minor sand-throughs can be touched up with a black felt-tipped marker. If you're using a waterborne clearcoat, seal the dye with dewaxed shellac.

—G.H.



CREATE CONTRASTING DETAILS

Ebonizing is easy, and opens up lots of design possibilities. The water-soluble dye powder dissolves in warm water and can be brushed or wiped on. Build up coats until you get the appearance you want.



Faux black top. You can use your ebony efficiently by saving the real thing for small details and ebonizing larger surfaces. On this piece, Hack ebonized the top and used real ebony for the beads, banding, and pull.



BLACKEN A FOOT

Divide and conquer. Masking tape won't block the dye from spreading. Instead, knife a fine line to divide the sections (above). Use a chisel to further define it (below), but don't press hard—a gentle touch will do.



Stay within the lines. Use a fine paintbrush to apply the dye right up to the knife line. A wider brush can be used in the larger area.



POP THE BEAD

Careful strokes. When ebonizing part of a molding, such as this bead, it needs distinctly defined transitions. Otherwise, the dye will roam. The black bead on this crown adds a delightful contrast, breaking up the broad butternut surfaces.

