Building sequence

When building a martin house — or any birdhouse — choose wood that’s both rot-resistant and insulating, such as Western red cedar. (Cypress would be another good choice.) Don’t use pressure-treated lumber; you don’t want to expose the eggs or nestlings to the chemicals involved in the treating process. Because the structure will be exposed to the elements year-round, use an exterior-rated adhesive and only stainless steel fasteners.

To start construction, cut the fronts, backs and sides of the nesting levels to size, and bore the 2-in. entrance holes. Then assemble the two nesting levels — I used polyurethane glue and stainless steel wood screws. Cut the slots for the lap joints in the nesting dividers with a jigsaw, slip the divider walls together and insert the assemblies into the nesting levels, attaching them to the perimeter walls. Then cut and attach the floor panels.

Glue and clamp the perimeter walls together and insert the nesting dividers. Check for square, and then drive in stainless steel screws for added strength.
the lifting cable, and you’ll attach a 1/2 x 3-in. stainless steel eye bolt that holds the lifting cable through the other for mounting the house. Secure the completed mounting support to the bottom of the first level.

Construct the roof assembly by first cutting its floor, roof panels and walls to size. Bore a 2-in. hole in each of the walls, and cover the holes from the inside with fine-mesh screen. Then attach the walls to the floor and the roof panels to the walls.

Cladding the roof

To create the copper roof cladding, first construct a simple sheet-metal break from a length of lumber that has been cut to produce a sharp edge. (You can use anything with a sharp, defined edge as a break, as long as it provides a continuous bending surface.) And though there are a variety of suppliers, we found our copper at Meisel Hardware Specialties (see SOURCES and Shopping List). Cut the copper to size with sheet-metal snips, lay the sheet on the break (allowing a 9/16-in. overhang) and clamp on a second length of wood to secure the copper sheet. Then use a mallet to tap down the overhang.

Attach the two main copper roof sheets to the plywood with outdoor-rated construction adhesive, and then glue down the copper ridges. Once the adhesive has set, paint the house white and attach four sets of positive-locking quick releases to the first cutting its floor, roof panels and walls to size. Bore a 2-in. hole in each of the walls, and cover the holes from the inside with fine-mesh screen. Then attach the walls to the floor and the roof panels to the walls.

Mounting the house

You might be surprised by the weight of a completed martin house — it’s too heavy to haul up and down a ladder. For safety (and because of the need for constant nest maintenance), I use a winch system (see drawing, p. 50) to raise and lower my martin house. A cont’d on p. 50

### MATERIALS AND CUTTING LIST

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>DESCRIPTION</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1st floor front/baard/8 x 7 x 24-1/2 in.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>1st floor sidea/8 x 7 x 22-3/4 in.</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>2nd floor front/baard/8 x 7 x 24-1/2 in.</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>2nd floor sidew/8 x 7 x 22-3/4 in.</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Nesting dividers/7/8 x 7 x 22-3/4 in.</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Floor panels/1/2 x 32 x 32 in.</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Roof gables/7/8 x 7 x 32 in.</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Roof panels/1/2 x 18 x 32 in.</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Base supports/1-1/2 x 5-1/2 x 32 in.</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>Copper roof cladding/6 x 33-1/8 in. x 32 gauge</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>Copper roof ridge/8 x 33-1/8 in. x 32 gauge</td>
<td></td>
</tr>
</tbody>
</table>

### SHOPPING LIST

- 8-ft. 1x8 cedar boards (5)
- 8-ft. 2x6 cedar board (1)
- 3-in.-sq. sections of fine-mesh screen (2)
- 4x8 1/2-in. exterior plywood sheets (2)
- No. 8 x 1-5/8-in. positive-locking screw eyes (4)
- 3-in. stainless steel eye bolt (1)
- 2-in. stainless steel screws
- No. 9863 copper coil from Meisel Hardware
- Polyurethane glue
- Outdoor-rated construction adhesive

### A PURPLE MARTIN PRIMER

Purple martins are the largest members of the swallow family in North America. The adults average 7 to 8 in. long and have a wingspan of about 12 in. The adult male is entirely purple-black, while the females and young males are dark on the back with gray undersides. Martins spend winters in South America and migrate north each year to nest (see range map, below). The male typically selects the nesting cavity and then sets about attracting a mate. Both male and female birds begin the nest, but the female usually puts the final touches on it.

Once the female has laid her eggs, she does most of the incubating; however, the male will occasionally relieve her for short spells. About 16 days after brooding begins, the young hatch. Both parents feed the young, with the average time from hatching to fledging being about 28 to 30 days. As summer winds down, both adults and fledglings form large premigratory roosts, preparing to make the trip south. Then suddenly something inside their biological clocks goes off and so do they, beginning the migration back south.

Purple martins eat flying insects (such as moths and butterflies, grasshoppers and dragonflies), taking them on the wing. But don’t be fooled into thinking that a martin colony will drastically reduce the number of mosquitoes in your yard. On average, a martin’s diet consists of no more than 3 percent mosquitoes. — MB

When drilling the 2-1/2-in. center hole, clamp the mounting support firmly to the work surface to prevent the torque from the hole saw from spinning the assembly.

Cover the inside of the gable holes with fine-mesh screen; then assemble the roof components.
Because of the devastating effect European starlings have had on martin populations, you may want to incorporate this starling-resistant entrance hole into your design if you live where starlings are prevalent. This 1-3/16-in.-high crescent-shaped entrance keeps out most starlings while allowing martins easy access.

boat trailer winch from a marine supply store, a pulley and safety strap, a length of steel cable rated for overhead lifting (never use rope) and a long steel pole are all you’ll need to create a safe lifting system.

cont’d on p. 52
The main reason people fail to attract martins is that the martin house is not placed correctly. Martins do not like trees, so don’t pick a heavily wooded site. Locate the house as far away from any nearby obstruction as the obstruction is tall. For instance, if you have a 60-ft. tree in your yard, place your martin house at least 60 ft. from that tree. Also, make sure to place your martin house at least 30 ft. from your home.

A source of good clean, fresh water (such as a small freshwater pond or a nearby stream) is another major advantage in attracting martins. However, martins have been known to fly as far as 2 miles for water.

Attracting martins is only half the battle. To keep them coming back, you’ll need to be an effective landlord. Your No. 1 responsibility will be driving away nuisance birds such as starlings and sparrows — both love to invade martin houses. Once either species takes hold, it’s almost impossible to get rid of them.

Active checking the nests is crucial to the survival of a martin colony. Contrary to popular belief, martins will not abandon their nests or young if you handle them. In fact, martins have come to almost expect it. Don’t be afraid to lower the house regularly to do egg counts, check on the health of nestlings and dust for parasites such as mites or blowflies. (Check with the organizations listed in SOURCES for information on appropriate pesticides.)

By acting as a responsible caretaker, you’ll enjoy years of watching the comings and goings of generations of purple martins — and the satisfaction of having done your part to preserve this important species.

— MB

PROPER HOUSE PLACEMENT

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For the mounting pole, use 1-1/2-in. schedule-40 welded steel pipe (1.900-in. o.d., 1.610-in. i.d.). Don’t mount the pole itself in concrete; rather, install a ground socket, which is nothing more than a 30-in.-long section of 2-in. schedule-40 welded steel pipe (2.375-in. o.d., 2.067-in. i.d.). The mounting pole slips easily into the ground socket and makes any pole-repair tasks simpler.

To keep the mounting pole from spinning in the ground socket, drill a 7/16-in.-dia. hole 3 in. from the bottom of the ground socket. Insert a 3/8-in. x 2-1/2-in. bolt through the hole and attach a nut. Then cut a corresponding V-notch in the base of the mounting pole. (The notch will sit astride the bolt and prevent spinning.)

To mount the pulley, use a hacksaw to cut a slot in the top of the mounting pole as shown in the illustration and drill a hole for the pulley’s bolt. Make a safety strap from flat stock, and attach both the safety strap and the pulley with a 5/16-in. x 2-1/2-in. stainless steel bolt.