

## Converting Martin Houses and Gourds to Starling-resistant Entrances

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To convert his martin houses and gourds to starling-resistant entrances, Lance Wood used the metal and PVC templates shown in this photo. He has added templates with crescent-shaped entrances as well.

About seventeen years ago, every spring was a stressful and difficult time at my Purple Martin colony in Central Virginia, both for my martins and for me. Because many of my martin gourds and aluminum houses had round entrance holes that starlings could enter, numerous starlings showed a dogged determination to occupy my martin housing, and they fought with and killed Purple Martins and destroyed martin eggs and young in the process. Once I had learned about starling-resistant entrance holes (SREHs) from the Purple Martin Conservation Association (PMCA), I began to convert my gourds and houses to starling-resistant entrances, but the starlings continued to claim the remaining gourds and compartments that still had round holes (and to kill martins that they found inside), until I could slowly eliminate every starling by shooting, repeated nest removals, and, most importantly, by using that great invention from Andrew Troyer, the "S&S (i.e., 'Starling and Sparrow') Controller Trap" (which is sold by the *PMCA*). As I stated in an article that I published in the *PMCA's Update magazine* (Vol. 8(4)), my experiences in 1998 led me to predict that, when used in combination with starling-resistant entrances for all martin housing, the "S&S Controller Trap" can eliminate practically all starlings from a martin colony, with very little time or effort required from the martin landlord. Now that I have converted all of my martin gourds and houses to starling-resistant entrances, my experiences during the years since 1999 have confirmed my prediction: the starling-resistant entrances have kept all starlings out of all of my martin housing, encouraging virtually every starling in the area to enter the S&S Controller Trap, rather than struggle to force its way into the starling-resistant entrances of the martin housing. I am now a total "convert" to starling-resistant entrances, but for busy martin landlords like myself, converting a large number of gourds and houses to starling-resistant entrances can be difficult and time-consuming. This article is intended to pass on a few useful ideas to make the "conversion job" quicker and easier.

**Converting Trio Martin Houses with Starling-Resistant Replacement Doors.** As manufactured, the 6" x 6" compartments in Trio martin houses are small enough that some starlings won't nest in them (although some starlings will, if no better cavities are available). Unfortunately, those Trio compartments are also smaller than desirable for a family of martins, and their small size leaves them extremely vulnerable to owl predation. However, as soon as one converts a Trio house to larger rooms to save the martins from owls, those Trio compartments become irresistible to starlings. Fortunately, the *PMCA* now sells doors with starling-resistant entrances for Trio housing. Even if one has not converted one's house to larger compartments, it is still desirable to install starling-resistant doors, to keep the starlings from entering the compartments and killing martins. But note: even though the new doors will keep starlings out, the starlings persist in trying to claim the houses, and they fight with (and kill) the martins for them. Having Troyer's Trap nearby will solve that problem by eliminating the starlings.

**Using Starling-resistant Templates to Retrofit Martin Houses and Gourds.** It is easy to cut a starling-resistant entrance in a new natural gourd using a power drill and hole saw, and/or a keyhole saw. However, for older gourds and aluminum martin houses, I convert their obsolete round holes to starling-resistant entrances with two types of starling-resistant templates made of sheet aluminum and of ultraviolet light-resistant PVC plastic, respectively. The SREH template is attached over the round entrance holes to reduce each entrance to the starling-resistant height of 1&3/16 inches (see photo). Of course, it is not enough to reduce the height of the entrance to 1&3/16 inches; expanding the width of the entrance hole is also essential, to ensure that the martins can still enter. As an experiment, I placed both types of starling-resistant templates over the round entrance holes of some gourds without widening the entrances, to see how narrow an entrance the martins could manage. I found that martins could squeeze through an entrance 1&3/16 inches high by 1&7/8 inches wide only with great difficulty, almost getting stuck in the process. For an entrance 1&3/16 inches high by 2&1/4 inches wide, the martins could enter with very little difficulty. When the entrance was widened to 2&3/8 inches or more, martins could enter with ease. Conclusion: when you install a starling-resistant template, it is important to widen the old entrance (e.g., by using a keyhole saw), so that martins can enter without undue difficulty. Use care (and sandpaper) to ensure that no sharp edges or splinters remain around the edges of the entrance hole after it has been widened, to avoid injury to the martins.

Both the aluminum and the PVC starling-resistant templates work well on gourds and on aluminum or wooden martin houses. The sheet aluminum templates bend easily to conform to the curvature of the gourd's surface, and PVC templates work equally well on gourds. The PVC templates are thicker than the aluminum ones, and that may prove to be advantageous for excluding starlings. Either type of template can be attached with an electric drill and "pop-rivets," but I use sheet-metal screws (so that I can remove the templates later if I need to), after cutting off the sharp tip of each screw and/or flattening the tip with a hammer, so that no sharp screw tip can protrude inside the compartment to injure the martins. I purchased the aluminum templates from Frank Prekup of Milton, DE. I purchased the PVC templates from Floyd Bontrager of Nappanee, IN. Both templates are well worth the modest amount charged for them. I do not know whether either of those gentlemen still manufacture and sell those starling-resistant templates, but now they can be purchased from various sources, including the *PMCA*. The *PMCA*'s website is [www.purplemartin.org](http://www.purplemartin.org) I sell those SREH templates from my private stock to guests at the annual Purple Martin Field Day who want to purchase them.

**Combination Starling-resistant Entrance Template and Access Door for Natural Gourds.** Having equipped about 160 natural gourds with access doors made from the top portions of plastic jars, I can testify to the usefulness of that innovation. However, the process of adding the plastic jar top access doors is time-consuming and expensive, and leaves one with the maintenance challenge of painting and repainting the plastic access door to protect it from the deteriorating effects of sunlight. Seeking a simpler way to provide access doors for natural gourds

with less expenditure of time, money, and maintenance effort, I asked Mr. Prekup, the manufacturer of the sheet aluminum starling-resistant templates, to make me a few experimental templates about 5 & 1/4 inches by 5 & 1/4 inches in size, and with the starling-resistant entrance stamped out near the center/top of each template (see photo).

When I first purchased SREH templates made from sheet aluminum, only templates with oblong SREHs were available, but several new versions of the SREH have been developed since that time. Note, however, that some of the newer “excluder” SREH shapes may work well for martin houses, but not for gourds. Some landlords (including me) have had success with oval SREHs, whereas others have reported that some starlings were able to enter them after repeated efforts. In recent years I have most often used the crescent SREHs, since I have found that they will reliably exclude all starlings. Nevertheless, both the crescent and the oblong (i.e., oval) starling-resistant entrances have worked well on my gourds, so long as the Troyer S&S Controller is nearby. Hardly any starling has ever managed to enter any of my gourds, which are all outfitted with either the crescent or the oblong SREH. After a starling tries and fails to enter the SREHs, that starling usually flies over to Troyer’s trap, where it is caught and euthanized. Nevertheless, I have concluded that the crescent SREH is probably the safer bet, especially for houses. So at present I now use crescent SREHs whenever I have the choice.

Here is how I install the combination SREH and access door template on a natural gourd: Using a 4-inch diameter hole saw, I drill out a 4-inch diameter hole at roughly the place on the gourd where I want the entrance to be (see the drilled gourd in photo), and I attach the large starling-resistant template over that hole with four sheet-metal screws (with the sharp tips flattened, as described above). The aluminum bends easily to conform to the curved surface of the gourd, and the sheet-metal screws press the aluminum tight against the gourd, so there is no gap for rain to blow in around the edges of the template. The sheet aluminum has a durable coat of baked-on white paint, but even if that should wear off, the unpainted aluminum will reflect heat almost as well as white paint, so repainting maintenance for the access door is minimized. I further protect the template and entrance hole from rain by adding an elongated sheet aluminum canopy (5 & 1/2" long x 10 & 1/2" wide), that will also serve to fend off all flying predators. With the addition of a 1/2 inch PVC elbow for ventilation, the gourd is ready to be painted white and used. This approach takes a small fraction of the time it would take to add an access door made from the top of a plastic jar, and at substantially less expense. To remove the access door for a nest-check or to clean old nests out of gourds at the end of the season, simply remove the four screws, a process that takes about 30 to 45 seconds; after the nest-check, replace the template. If, through years of use, the screw-holes in the gourd enlarge, one could use thicker screws or insert screw anchors. For many years now I have been using the combination access door/starling-resistant entrance hole sheet aluminum template on several gourds, and it has worked very well. Those gourds are always among the first selected by returning purple martins, which find it easy to hang onto and enter and exit the gourd through the SREH stamped into the aluminum template.

For many years now my martin colony has remained completely starling-free, because all of my martin housing has SREHs, plus a Troyer Starling and Sparrow Controller Trap located very near to my martin colony. I no longer have to shoot starlings or remove their nests. For many years now, not a single starling has entered any of my martin compartments or gourds. The martins all seem able to enter the starling-resistant entrances, with little or no difficulty. They go through a learning process with the new entrances, but soon learn to use them easily. So although the process of converting all of my martin housing to SREHs was a lot of work, I am very pleased with the results.

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