

### *Perches for butchers*

Shrikes are remarkable songbirds. In English, they are often called butcherbirds. Why? Because of the way male shrikes advertise their prowess during the breeding season. They impale the corpses of their prey on twigs, thorns or even the barbs of an old-fashioned barbed-wire fence. Potential mates get turned on by these grisly displays. The females seem to love them. Did I tell you about the black feather masks that shrikes wear over their eyes? I am not making this up.

Butcherbird displays give you a fine idea of a shrike's varied diet: mostly larger insects like grasshoppers, dragonflies and bees, but also spiders, lizards and even the occasional mouse. If you're in the right size range for a shrike to hunt, look out!

So, if they're so good at eating all sorts of common things, why aren't they all over the place like sparrows and robins? Because shrikes prefer to hunt in a certain restricted way. They like to sit up on a post or branch and scan the ground around them. Then they pounce.

Compared to birds that do hunt on the wing, shrikes are not such spectacular fliers. So they rarely take prey that is flying — unless it is something slow like a butterfly.

They also rarely hover to scan the ground below. Hovering is very hard work, and usually makes their meal too expensive. Would you run a marathon for a slice of bread?

Because of their hunting style, shrikes need a semi-open landscape. Low vegetation, like grasses, interspersed with shrubs from which to scan and pounce. Not a terribly scarce landscape at one time. It proved a recipe for success in both the Old World and the New.

The world has thirty species of shrikes. In the Old World, they range from Japan to Norway and down to South Africa. Two species live in North America. Australia has no true shrikes — the very similar looking Australian butcherbirds are unrelated. South America also lacks shrikes.

Today we must face the very real possibility that all species of shrikes are on the road to extinction. In European and American countries where bird counts are a tradition, shrike populations have declined over 50%. Some countries have lost entire species; Switzerland, for example, has lost two of its four. So has the Czech Republic.

Most likely, a variety of changes has precipitated the decline of the shrikes. The soft

edges of small farm fields, with their hedgerows and scattered trees, have given way to the sharp edges of modern agriculture: corn to woods in two meters. Perhaps pesticides have poisoned the grasshoppers, crickets and beetles that form the bulk of shrike diets. And, whereas the barbed-wire fences of yesterday were supported by wooden fenceposts that made great shrike perches, today's fences use thin steel posts. Steel posts are not so good for a shrike's business ventures.

Whatever the underlying causes, there is all too real a chance that our great-grandchildren will not be able to see any shrike — except in books alongside the pictures of other once-common marvels that we have swept aside. But there are many people who have decided never to let that happen.

Among the most active is my friend Reuven Yosef — you remember him from the psuedo-salt-marsh he built in Eilat. Yosef was the guy who explained that male butcherbirds impale their prey to show off for their mates. And then he backed up his explanation with convincing scientific evidence. Believe it or not, this common and ostentatious behavior had gone without its true explanation since the dawn of natural history. Reuven nailed it.

Yosef did his Ph.D. on a working ranch in the middle of southern Florida. A very special working ranch. The MacArthur AgroEcology Research Center is a unit of Archbold Biological Station. Its 10,000 acres really are devoted to cattle raising; its not called a ranch for old-time's sake. It's got a bunch of cowboys, a ranch house, horses, pastures, corrals. I've seen the place myself, and I can tell you that — except for the high humidity — it makes me feel downright at home, almost as if I were in Arizona.

Yet, as you surely guessed from its name, the MacArthur AgroEcology Research Center is not just a ranch. Its job goes beyond beef. The folks at Archbold want to use the ranch to discover how to make money from cattle that graze in an ecologically sound landscape. Keeping diversity high is, for sure, a part of that. Sounds like reconciliation ecology, doesn't it?

Yosef studied the ranch's population of loggerhead shrikes. That's the more southern of North America's species, and it is certainly one of those in trouble. He banded them, weighed them, watched them hunt. He studied the times they nest and the number of times they would try to re-nest if weather or a predator destroyed their first effort in a season. He followed their babies' progress as the parents struggled to bring up their own. Experienced shrikes seemed to accept him as a natural phenomenon — if not a member of the family. I have seen him call them, and watched them come promptly to his field vehicle for a treat of mouse flesh.

From his work, Yosef figured that a lot more shrikes could use the pastures. There were

plenty of big insects where no shrikes lived. But the pastures had very few perches. Easy to fix.

He went to a lumberyard and got some fence posts. He stapled a little bit of barbed wire to one end to help the shrikes keep their footing. Then he installed them in a pasture where shrikes lived, but did not use much of their territory for hunting. Being a card-carrying scientist, he did not do this to all the shrike territories, but to half. (Naturally, the other half were the controls.) The most difficult part of his job was convincing the cowboys not climb in their jeeps and use the fence posts as a slalom course.

Here was the idea.

Yosef guessed that those shrike territories were as holey as a Swiss cheese. The birds were hunting only near a proper perch — that was the cheese part — and ignoring the parts too far from a perch — that was the holey part. He wanted to use the fence posts to fill in the holes.

If he succeeded, the shrikes should shrink their territories. Why? Because territory is expensive to defend. Not only that. It also costs a lot to fly from your nest to your hunting perch and back, especially when the perch is far from your nest. So, why defend a territory larger than you need?

And if the shrikes did shrink their territories, that would make room for more shrikes. Aha! Yosef was really conducting an experiment to bolster the population of a bird in trouble.

Results came quickly. Within the first spring, territories with extra fence posts shrank. The minimum shrinkage was 68.6%. One had shriveled up by 83.9%. On average, the experimental territories were 77% smaller. But the controls had stayed the same size.

As expected, new shrike 'homesteaders' settled in the land left vacant by the smaller territories. The loggerhead shrike population increased 60%.

The smaller territories brought another advantage to the nestlings. They helped nestlings survive. Parent birds in smaller territories had 33% more successful clutches than controls, and raised 29% more chicks per successful clutch. Oversize territories do hurt.

It all amounts to a recipe for reconciliation. Now we know how to raise the reproductive success of loggerhead shrikes and provide them lots more habitat in a working cattle ranch. There is no need for these shrikes to join the list of the doomed

in the Red Book of Rare and Endangered Species.