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## What constitutes a Proper Band Size

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# News, Notes, Comments

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## Opinion Note

### What constitutes a proper band size?

For many decades choosing a band size for a newly captured bird was quite simple. One just looked it up in the North American Bird Banding Manual, and put on the recommended size. Not surprisingly, in recent years there have been direction and momentum to use a leg gauge to best to determine the correct size. I want to address the questions: how often should you use a gauge, and is the best band size one that “just fits snugly”, one that is “a bit big”, or more problematically one that is “just right”?

To decide proper band size for many species, it is certainly efficient to use the most common size (e.g., size 0 for most warblers), and sticking with it. Of course, with the advent of new sizes, this has become somewhat more complex. One of these sizes seems to me to be almost an example of a distinction without a difference, as size 0A (2.11 mm) inside diameter differs by from size 0 (1.98 mm), only by the width (about 0.10 mm) of an average human hair! This makes choosing a size difficult. As a guideline to determine proper size, Blake (1954) measured the tarsus diameter of smaller birds and added a clearance of 0.2 mm or six percent of the band's internal diameter whichever is larger. In a recent excellent article in *NABB*, Yunick and Hicks (2011) also discussed finding the right size with a lot of good information about variables.

In using a gauge to decide size, should only a few, some, or all individuals of a given species be measured? In some species there are a fair proportion of birds on the cusp between sizes on the gauge, in part due to geographical, sex, or age differences. For example, at Walter Sakai's (pers. comm.) station, he has found such variation and requires his helpers to use a leg gauge on Spotted and California towhees, Hermit Thrush and House Finch. These few species are those that he and his

banders have noticed to exhibit some degree of variability (e.g., Sakai 2008). Similarly at the Klamath Bird Observatory, the Spotted Towhee and two jays vary in leg size and are routinely gauged, but for everything else, the first-listed size in manuals is used.

The gaps of leg gauges for different sizes are not always very precise and some tend to be a bit less than the inside diameter of the indicated band size, and can be similar to the difference between a 0A and a 0. Also, banders need to be careful in using the gauge properly; it is a precise measurement. That is, to measure exactly at the widest diameter of the tarsus. We see in practice in many folks banding with us having the gauge a bit off a right angle to the leg a fair amount of time (especially in folks banding for only a few weeks). This can easily result in being off by the difference of one band size to the next.

This gets into the core question of the possible downsides as the bander chooses between a band being either a bit too big or too small. The immediate risk is obvious: if a band is too small so that it constricts the leg either upon application, or due to a seasonal change in leg diameter (such as in female hummingbirds). As to a band being on the large size, just what is “right” and what is “too large”? The NABC Study Guide says:

*“Generally, a band is said to be a good fit if, when closed properly, it can rotate and slide freely up and down the tarsus without slipping over the metatarsal joint or down over the bird's toes. Loosely fitted bands may slip and so constrict the toes that the bird cannot grasp with its feet, catch the hind toe between the leg and the band, or slip onto the metatarsal joint so the bird cannot bend its leg.”*

That defines the extreme of a band slipping over a joint, but there is quite a difference between a size that is exceedingly large and one that is just a bit snug. The basic question the bander must decide is: “is it better to err on the size of a bit small, or a bit

big?" I would strongly suggest that using a slightly larger size is far better than smaller, so as to accommodate possible (and relatively rare) accumulating under the band of dirt or flaking scutes from the tarsus, ultimately leading to some constriction. Using the leg gauge one should use the widest part of the entire tarsus, as tarsi are oval, and also the width can vary along its length (Sakai, pers. comm.). If one finds that the size will just precisely fit, I would strongly consider using the next larger size, of course, within safety parameters.

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### Literature Cited

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Sakai, W. H. 2008. Spotted Towhee band size revisited. *North American Bird Bander* 33:12-14.

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## Books

### **The Owls of Whitefish Point, a Bird-Banding Adventure**

by Susan H. Craig, Outskirts Press, ISBN 978-1-4787-2632-6, paperback. Reviewed by **Walter H. Sakai**.

This little book (88 pp) is an evening's reading and would be enjoyable to any bird bander, especially for those of you who have ever signed on to work for a season at a field station. Susan and her husband Pete applied for a two-month gig to capture and band owls at Whitefish Point Bird Observatory in Michigan, and this is their story.

To their surprise, they were offered the position. In hindsight, considering the rigors of banding at a remote site, at night, and in the snow, they were probably the only applicants. Then, unlike docile sparrows and warblers, owls bite and have sharp talons. And those who have banded owls and hawks know that we do not wear gloves while handling these birds. Susan describes catching and banding docile Boreal and Saw-whet owls, as well as aggressive Barred Owls, with bloodied fingers and hands covered with band-aids. And do not forget the Long-eared and Northern Hawk owls.

As I read this little book, I was fondly transported back to my stints in Tortuguero in Costa Rica, banding decidedly small Neotropical migrant and resident rain forest passerines. Banding during daylight hours. It was quite a bit warmer. The concerns were fighting off the mosquitoes and ants, and keeping the sweat out of my eyes.

At the end of the banding season, leave this little book at the field station for next year's banders to read.



Boreal Owl by George West