

# Some notes on using walk-in traps

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Meissner, W. 1998. Some notes on using walk-in traps. *Wader Study Group Bull.* 86: 33 -35.

Walk-in traps are widely used by ringers to catch waders, both at inland and at coastal sites where there are no tides. There are several types of such traps (Bub 1971) and many of them have been used at Waterbird Research Group KULING ringing stations in the Puck Bay region (southern Baltic coast) since 1983. They differ in shape, dimensions, position of capturing chamber, types of entrance and material used for their construction (wire netting or thick fish netting). The traps have been set in many different habitats e.g. sandy seashore, small shallow muddy bays, sewage farms, wet meadows. We have ringed a total of over 30,000 waders up to 1997. Efficiency of catching depends greatly on the way the walk-in traps are set and also on their type. Walk-in traps are very convenient to use and they are safer for waders than mist-nets (Meissner 1992). Moreover, catching in walk-in traps is almost independent of weather conditions. Below, I sum up KULING's experience of wader catching using walk-in traps and also give a piece of advice on their use.

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## TYPES OF WALK-IN TRAPS

WRG KULING has used several types of walk-in traps, but we have developed at least two models which in our opinion provide best catching results in different habitats (Figure 1). The first model (A) was considered safe, limiting the mortality of trapped birds (Meissner 1992), whilst the second one (B) has been used in Poland since the sixties. Both of them are lightweight and can be carried by one person. They are made of wire frames with thick fishing net (diameter of the yarn not less than 1mm, mesh 1.8 - 1.9 mm). Fishing net is less permanent than wire netting which has a protective zinc surface, but the latter causes more injuries and plumage damage in trapped waders - especially in snipe *Gallinago gallinago* which run their heads against the roof while fluttering inside the trap. The frames are fastened together with the pieces of wire, but different methods can be applied. Both models may be produced in an unfolded version, which requires less wire, but this model is less convenient for transporting and storing. Moreover, when the net is damaged, it is easier and quicker to exchange one frame than to take the whole trap from the catching site for repair. All frames should be made of rust-proof wire, for example plated by zinc. This prolongs the period of time for which it can be used, especially in marine habitats. Unprotected wire with a diameter of 5mm rusts completely after three to four years of use.

The total height of the trap should not be greater than 40 cm. Such traps can be used for a wide range of wader species (up to Oystercatcher size). We also used 50 cm high traps which, although effective for larger wader species, seem to put off smaller wader species.

Entrances are very important parts of the trap (Figure 2). A funnel-shaped entrance with proper "depth" is in my opinion better than "curved-wall" type, because fewer trapped waders manage to escape. "Funnels" should not be placed in one line, because the first entrance leads the bird directly to the second one and it can then easily leave the trap.

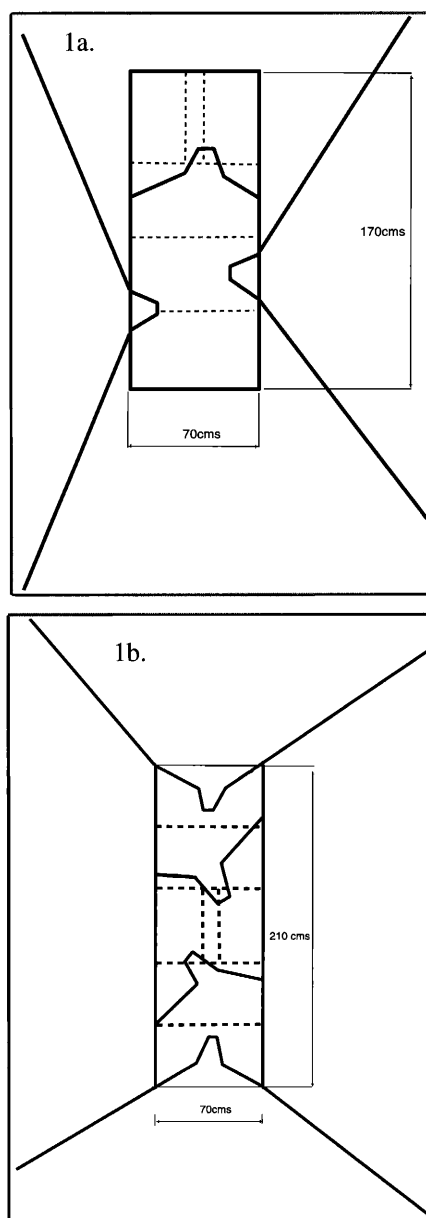
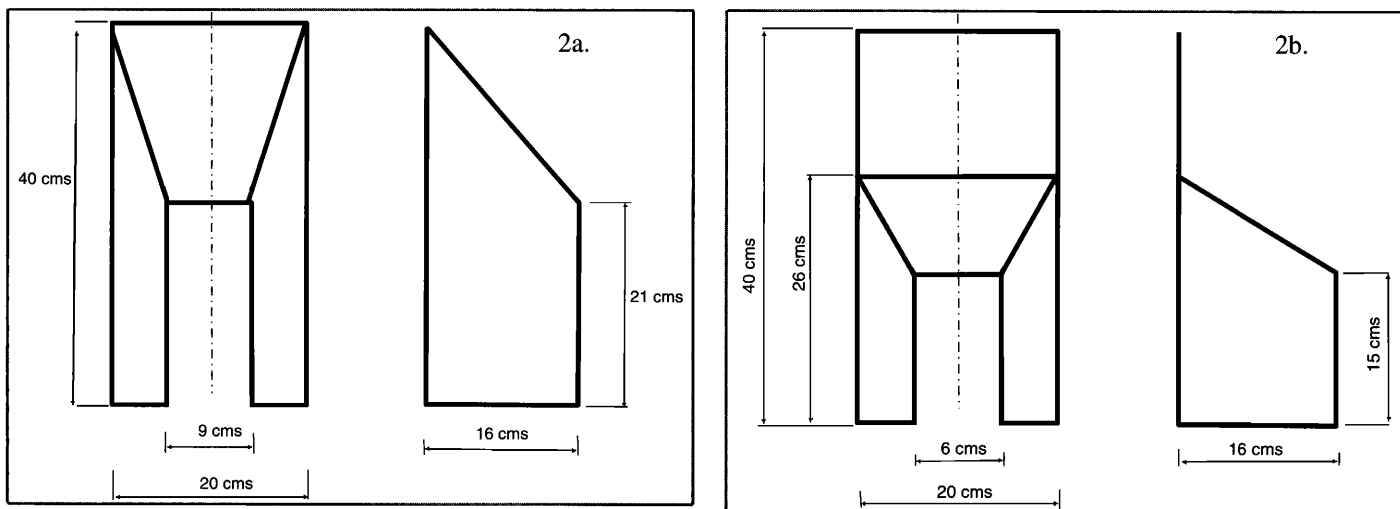


Figure 1. Two models of walk-in traps used recently at WRG KULING ringing sites. All dimensions in cm.



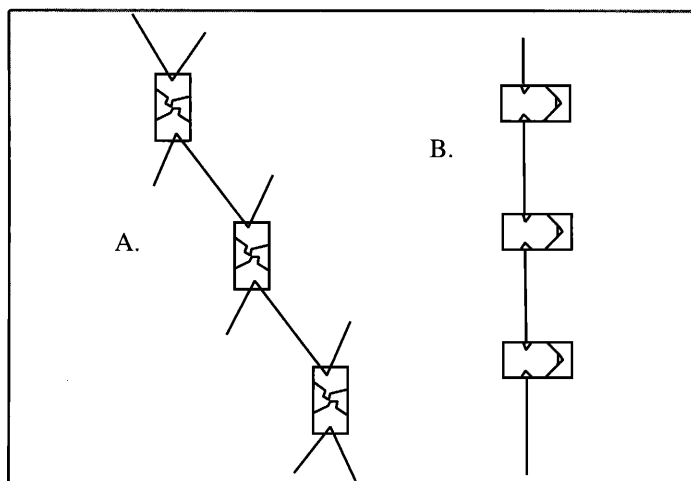


**Figure 2.** Funnel-shaped entrances. A - main entrance, B - entrance to the capturing chamber.

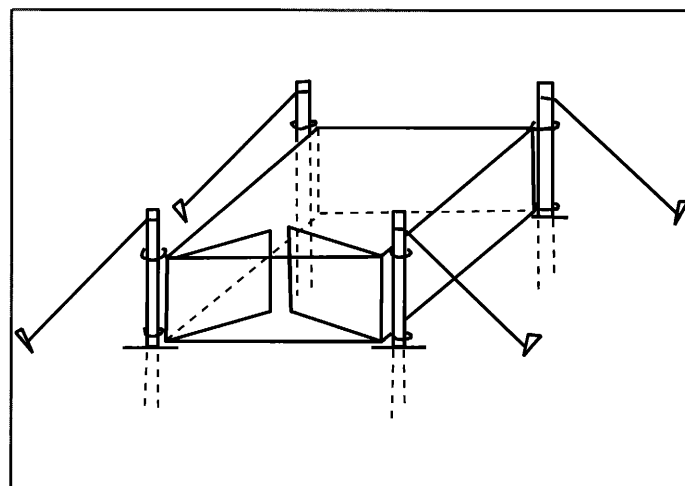
A tent-like walk-in trap is quite effective and, when folded, can be carried in one's pocket. They are made of fishing net and thick rope. We used this trap by pools and found it inconvenient to move it from one place to another very often (Figure 3). It can be used in places without changes of water level.

#### ADDITIONAL NOTES

Waders do not just enter walk-in traps during the day. At Reda mouth in September, waders very often feed all night even though there is no moon and stars in the sky. Trapping results at night are very often much higher than during the day. It is very important to check this from time to time and when night foraging is confirmed, the traps should be checked every two hours as in the daytime.



**Figure 3.** Two most common ways of setting walk-in traps. A - with V-shaped position of fences, B - setting in one line.



**Figure 4.** Tent-like trap.

#### WAYS OF SETTING

Proper setting of walk-in traps at particular ringing sites needs experience and depends on habitat. Setting traps connected with fences works better than a trap on its own. Another important point is the length and position of the fences. In habitats with clear shoreline between water and land, V-shaped fences are much more effective, whereas in muddy flat areas a single line of fences could also be useful (Figure 4). It is very important for the safety of any trapped birds that the capture chamber is set somewhere dry or, if this is not possible, that some sand or cut grass is placed in it. The latter keeps the trapped birds dry even when the traps are set in mud or wet meadow. Lightweight walk-in traps can also be settled on floating beds of seaweed or other water plants, but care must be taken that they do not gradually sink. In that case wooden poles should be placed under the trap along its longer walls.

Waders can sleep inside the walk-in trap, feed or search for the exit. The behaviour of each bird could involve a different energy expenditure, so estimating the original body mass of trapped birds is difficult or even impossible.

In areas where rapid changes of water level take place (e.g. rivers, sea coasts) traps must be moved when the water is rising. The number of people and traps at particular ringing site should be adequate in order to do it quickly.

Birds kept in traps become easy prey for raptors, because they learn very quickly how to use this source of food. Mammals take trapped birds mostly at night or at dawn, whereas birds of prey or corvids and gulls do so during the day. It is crucial to stop catching when the raptors begin to penetrate the traps. In



the daytime one can guard the traps (raptors are more shy than waders), but putting a special spring-trap on the walk-in trap roof may also be quite effective.

Walk-in traps are selective and their use produces some biases. They are less effective for long-legged species, although the first of the recommended models of trap was quite effective in catching large waders. Also visual foragers (e.g. Charadriidae) are not as easy to trap as tactile feeders. Thus, the species structure of trapping birds does not reflect those obtained from counts. Moreover, juveniles are more likely to be trapped than the adults.

When pieces of water plants or soft mud float in the water, the trap becomes caked with them very quickly. A dirty trap is less effective and should be cleaned to make its walls transparent. It sometimes takes an hour to clean a trap, so it is better to take such a trap away from the catching area.

There are some advantages and disadvantages of using walk-in traps. I recommend them for trapping waders in various types of habitat. It is worth noting that this kind of trap could be used also for catching wagtails, pipits, rallids and dabbling ducks.

#### REFERENCES

Bub H. 1971. *Vogelfang und Vogelberingung 1*. Die Neue Brehm - Bcherei. Wittenberg Lutherstadt.

Meissner W. 1992. Death of waders at ringing points of WRG "Kuling" at the Reda mouth and Rewa. *Ring* 14: 109-113.

