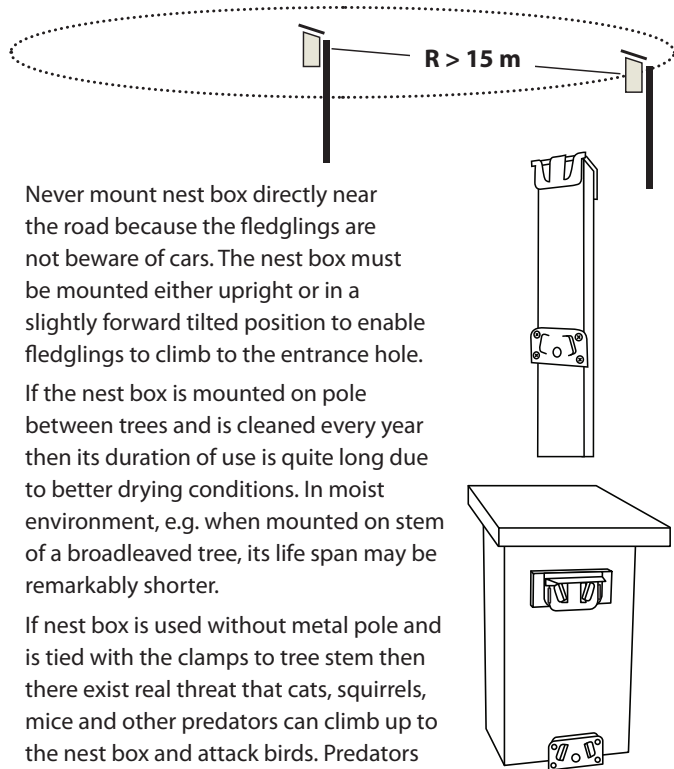


MOUNTING THE NEST BOX IN THE GARDEN

It is recommended to mount the nest boxes between fruit trees and berry bushes at the minimum distance of 15 meters. Such distance is necessary to provide sufficient forage area for the birds. If the trees and bushes are sparsely located the boxes must also be mounted at longer distances.



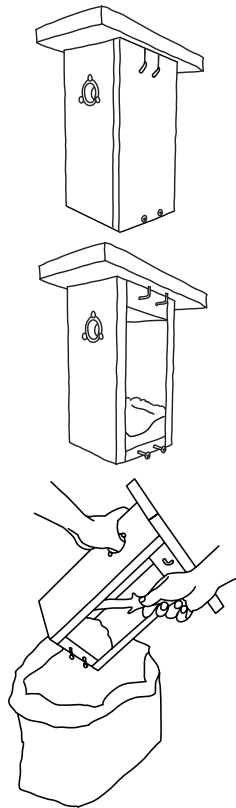
Never mount nest box directly near the road because the fledglings are not beware of cars. The nest box must be mounted either upright or in a slightly forward tilted position to enable fledglings to climb to the entrance hole.

If the nest box is mounted on pole between trees and is cleaned every year then its duration of use is quite long due to better drying conditions. In moist environment, e.g. when mounted on stem of a broadleaved tree, its life span may be remarkably shorter.

If nest box is used without metal pole and is tied with the clamps to tree stem then there exist real threat that cats, squirrels, mice and other predators can climb up to the nest box and attack birds. Predators can not climb metal pole. The nest boxes can be ordered with 2 or 3 meter long metal poles that have clamps attached to them. Recommended height for the box is 1.5–2 m from the ground. It is advisable to make a hole in the ground with crowbar for fitting the support pole into ground. If the length of the pole is insufficient for connecting it firmly to the ground or the ground is stony then some support structure for the pole must be used.

The nest boxes can be mounted in the garden at any time of the year. It is even recommended to mount the boxes already in the autumn while the tits sleep in the nest boxes taking shelter from cold and predators.

CLEANING THE NEST BOX IS EASY AND CONVENIENT



Unfortunately, the birds can not clear their nest box from old nest material. When the nest box is not cleaned in autumn the birds just add new nest material on top of the old material next spring. Over the years the nest box fills up with nest material and birds cannot use it anymore. The nest box must be cleaned once in a year from autumn until spring when birds do not inhabit the box.

In order to remove the nest box from the support pole just lift it from the clamps. Then use two small upper handles to open the side, pull the upper edge of the side-board away from the box and then lift upwards (pass the roof). Remove old nest material and brush the box if necessary.

In order to avoid spreading possible parasites found in the nest material, it is recommended to collect the old material and remove it from the garden or burn it.

The text has been compiled using information from following web sites:

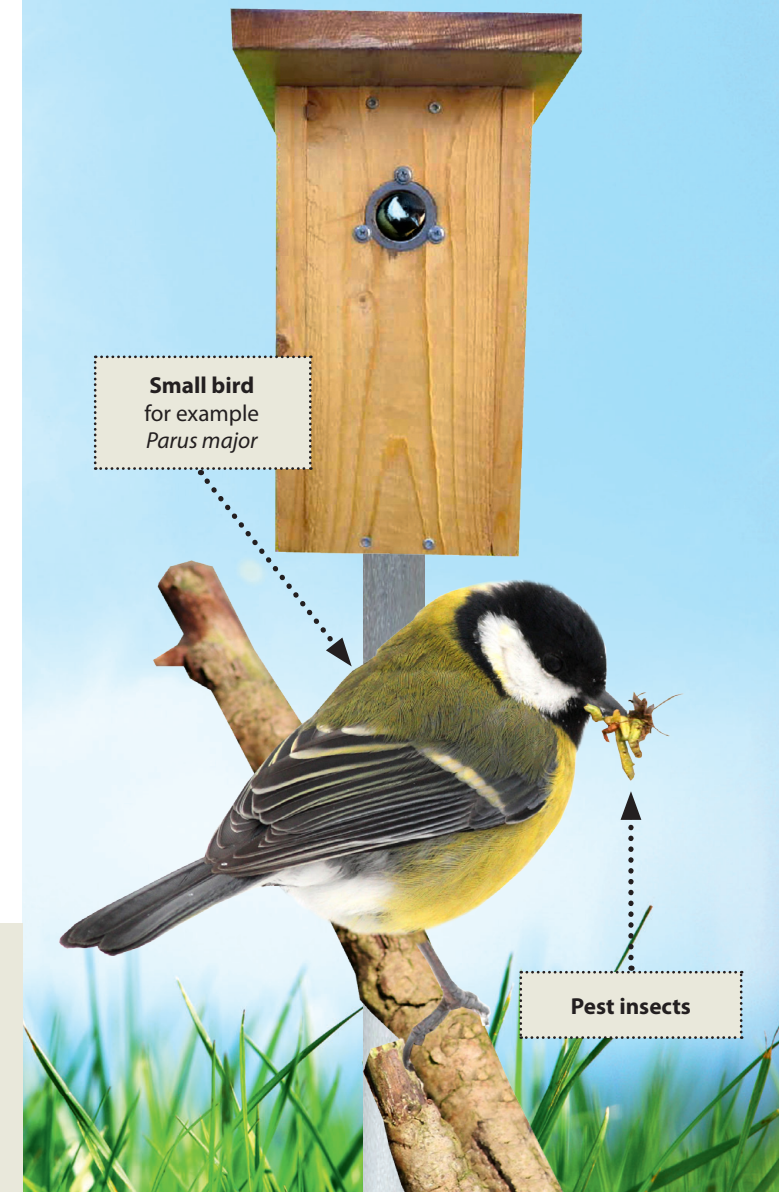
http://www.birdlife.fi/lintuharrastus/linnunponttojen_rakennusohjeet.shtml
and http://www.eoy.ee/sites/default/files/Suvised_aialinnud_2011_www.pdf.

Referenced research work:

Mols CMM, Visser ME (2007) Great Tits (*Parus major*) Reduce Caterpillar Damage in Commercial Apple Orchards. PLoS ONE 2(2): e202.doi:10/1371/journal.pone.0000202.

Manufacturer of the nest boxes:

FastGrowth OÜ, Rõõmu tee 6-3, 51013 Tartu, Estonia, EU,
GSM: +372 511 9714, www.birdnestbox.eu,
E-mail: jyri.jarvis@birdnestbox.eu,
The design of the nest box ©Formaks OÜ



BIRD NEST BOX

for pest control in organic orchards

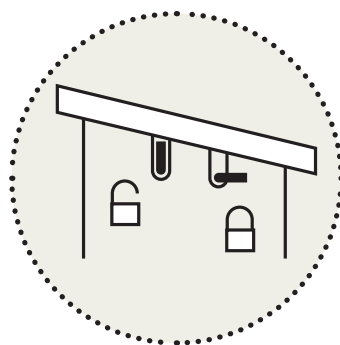
The nest box is made for pied flycatchers (*Ficedula hypoleuca*) and for different tits (*Parus major*, *P. cinctus* etc). Nesting period of tits and pied flycatchers coincides with the period when noxious insects start causing damage to fruit buds and small developing fruits in spring. While nesting, tits pick insects first and foremost from the close vicinity of their nest-box. Tits consume large variety of insects for food, including large amount of noxious insects, as well as their eggs and larvae.

According to the scientific study carried out in the Netherlands (Mols and Visser 2007), the great tits (*Parus major*) nesting in nest boxes in apple orchards can significantly (50%) reduce the pest-related damage to apple crop. The tits are generally not considered as a threat to fruits and berries. In autumn, fruit and berry crops are damaged by other species of birds, such as thrush and starlings, but in spring time they also consume insects and worms for food. As starlings are remarkably larger birds than tits, they do not fit through the opening of the nest box.

THIS NEST-BOX HAS ALL THE WELL-KNOWN FEATURES THAT ENSURE THE SAFETY OF NESTING BIRDS

- 1 The nest box is easy to remove from holding clamps for cleaning in the autumn. It is always better to open and clean the box on the ground to avoid dust emission while removing old nest content.

- 2 The side of the nest box can be easily and quickly removed and firmly and tightly closed.

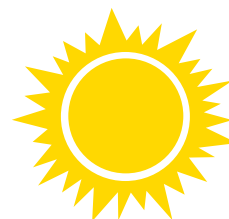


- 3 The entrance hole is surrounded by a metal rim to provide protection against woodpeckers, who could cut the hole bigger and attack the nestlings.

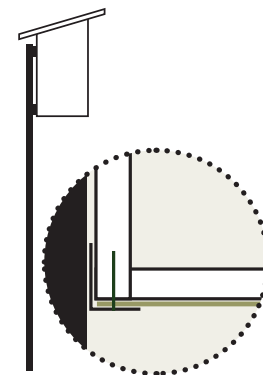
- 4 The inner diameter of both the rim and the entrance hole is **32 mm** which is recommended diameter for great tits (*Parus major*), Siberian tits (*Parus cinctus*) and pied flycatcher (*Ficedula hypoleuca*). Other smaller species of tits such as blue tit (*Parus caeruleus*), coal tit (*P. ater*), crested tit (*P. cristatus*), marsh tit (*P. palustris*) and willow tit (*P. montanus*), can also use the nest box.

However, it is advisable to use nest boxes with smaller (**28 mm**) entrance hole for smaller tits, otherwise the bigger tits may supersede them from the nest box. All the listed bird species are active pest consumers and do not damage fruits.

- 5 The roof of the nest box is made of three-layer wooden board in order to provide protection against excessive heat emitted by the topmost board which heats up in the summer. If the nest box is too hot, the nestlings lose too much energy for cooling.



- 6 The floor is reinforced with metal plate attached to clamp holding the nest box. This is necessary to avoid the collapsing of the floor that becomes brittle after decades of nesting.



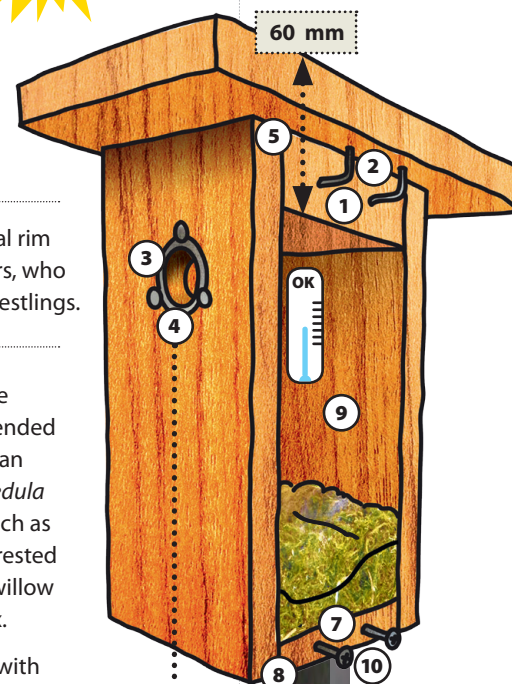
- 7 The floor is fixed between the sides to avoid rainwater accumulation and to keep the nest material dry.

- 8 The floor has 8 mm holes in its corners for ventilation. Ventilated nest material is dry and warm. Nestlings emit significant amount of water vapour when growing and without ventilation the water would condense from air to nest material.

- 9 Inner sides of the box are coarse (not planed) – fledglings can easily climb up to the entrance by the coarse sides.

- 10 Screws are used instead of nails for stronger connection of box details to prevent the development of slits as time goes by. Slits must be avoided to prevent birds from getting their feet stuck in them. Any slits must be filled with some sort of filling, e.g. silicone sealant.

- 11 Metal support pole prevents predators from climbing up to the nest box and disturb adult birds feeding their nestlings.



60 mm

Ø 32 mm
Ø 28 mm

