Offerdalspipa (the flute from Offerdalen)

Fugure 1. Swedish folk flutes

History and Structure

Instrument builder and folk musician Gunnar Stenmark builds flutes in several keys traditional Swedish, including Härjedalspipa, Offerdalspipa, Bjårskpipa and Caval.

The Härjedalspipa is a cylindrical-bore flute with six finger holes. Folk musicians Mats Berglund, Ale Möller and instrument maker Oskar Olofsson revived the instrument through their project *"Musik i Härjedalens skogar förr och nu"*. Gunnar studied flute making for several years under Oskar's guidance.

An Offerdalspipa resembling the Härjedalspipa was found in the collection of the Offerdalen local heritage association. It had been donated to the association in the 1960s by a man from Fiskviken. The Offerdalspipa has six finger holes, is stained brown, and has a planed flat upper surface. The flute is tuned to a major scale.

Figure 2. Offerdalspipa

Building Steps

A short video showing how to prepare the material:
https://www.youtube.com/watch?v=b6JItDlMdMg

The blank for a C[1]-tuned flute is a 35 cm long wooden tube:

- outer diameter: 25 mm
- inner diameter: 13 mm

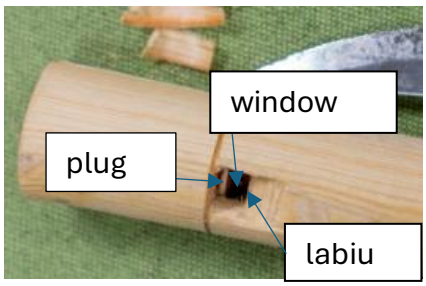
Figure 3. Tube, plug, and working plug

You need two plugs: a tight-fitting plug for the blowing end and a smaller, looser working plug. Apply raw linseed oil to the inside of the flute or lightly char the inner surface before drilling the holes (see video). If you use porous wood, it is advisable to oil the plug as well.

Place the blank for drilling so that the annual rings are horizontal. Drill a Ø 6 mm hole about 4 cm from the end so that the drill bit meets the working plug. With harder woods such as birch, drilling may succeed without a plug, but spruce and pine split easily without support beneath the hole.

Insert the working plug inside the tube up to the upper edge of the hole. With a sharp knife, shape the upper edge of the window to a width of 8.5 mm and cut the sides to a length of 7 mm. Move the plug to the lower edge of the hole and carve the lower edge of the window — the labium, where the sound is produced. The distance from the upper edge of the hole to the bottom is 17.5 mm. File the edges smooth.

Place the plug in the blowing end so that the annual rings are horizontal when the sound hole faces upward. Measure the width of the sound window with calipers and transfer the measurement onto the plug with two marks. Deepen the marks with a knife and carve a wavy air channel between them using a knife and chisel. The air channel should guide the airstream to the center of the labium. Shape both the blowing end of the flute and the plug slightly tapered.



Sand the inside of the flute (e.g., 800-grit sandpaper) and oil if necessary. Test blow. Thin the labium if needed and adjust the angle of the air channel until the sound is clear and strong.

Drill the finger holes with a 5 mm bit according to a model instrument. Plane the surface flat around the holes. A higher sound window produces a softer tone, while a lower one gives a sharper and brighter tone. The planed upper surface of the Offerdal flute provides precise playing control while keeping the structure strong. The distance from the upper edge of the finger holes to the bore bottom is 15 mm.

Figure 4 a–d. Stages in shaping the window, plug, and mouthpiece.

Tune the flute by enlarging and lowering the holes. Start from the lowest hole and work upwards. The distance between the labium edge and the finger hole determines the pitch: the shorter the distance, the higher the note.

Sand and fine-tune the tuning. If the fundamental note is too high, a ring can be added to the lower end to reduce the opening. If both octaves overblow too easily, the air channel angle may be too steep or too shallow in relation to the labium.

Figure 5. Drilling a finger hole

Figure 6. Planing the upper surface

Figure 7. Mouthpiece and sound hole are ready.

The first two images are from Gunnar Stenmark's website:
harjedalspipan.se

Other images are from the event "Læven og lokk – Nordic instrument-making seminar" in Oslo, 23–24 October 2025, photographs by Karstein Grønnesby. The seminar was organized by Karstein Grønnesby and Sylvelin Hege Sevilhaug in cooperation with Norsk lur- og bukkehornlag.

Figure 8. Finished flutes

Video from the instrument-building seminar:
https://www.youtube.com/shorts/c-WmTTitUlM

Larvik, 27 November 2025
Sylvelin Hege Sevilhaug and Gunnar Stenmark
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