



Feb 08, 2019

Version 1

Equine parietal bone harvesting V.1

DOI

dx.doi.org/10.17504/protocols.io.xvkfn4w

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DOI: <https://dx.doi.org/10.17504/protocols.io.xvkfn4w>

External link: <https://doi.org/10.1371/journal.pone.0249451>

Protocol Citation: Lilibeth A L.A.Z.M. Zambrano M, David Kilroy, Arun Kumar, Michael D. Gilchrist, Aisling Ni Anaïdh 2019. Equine parietal bone harvesting. **protocols.io** <https://dx.doi.org/10.17504/protocols.io.xvkfn4w>

Manuscript citation:

M. LAZ, Kilroy D, Kumar A, Gilchrist MD, Annaïdh AN (2021) The presence of Wormian bones increases the fracture resistance of equine cranial bone. PLoS ONE 16(4): e0249451. doi: [10.1371/journal.pone.0249451](https://doi.org/10.1371/journal.pone.0249451)



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Protocol status: Working

We use this protocol and it's working

Created: February 07, 2019

Last Modified: February 08, 2019

Protocol Integer ID: 20108

Keywords: cranial bone, 3-point bend tests, parietal bone harvesting, like specimens from the parietal bone, parietal bone, horse skull, like specimen, beam, procedure

Abstract

This is the procedure carried out to extract beam-like specimens from the parietal bone of horse skull.

Guidelines

The general procedure is divided in different phases:

- Braincase extraction
- Sample cutting
- Sample storage

Materials

Vertical band saw, scalpel, ruler, pencil, saline solution 90%, steril gauze.

Troubleshooting

Safety warnings

! Throughout the whole process you should wear:

- Latex gloves or similar
- Safety goggles
- Lab coat
- Disposable apron

Before start

- At least two people should be involved in the first part of the process.
- The horse skull(s) should be thawed at 4°C for at least 24 hours before the procedure.



Braincase extraction

1





Cutting of the brain case from a horse head

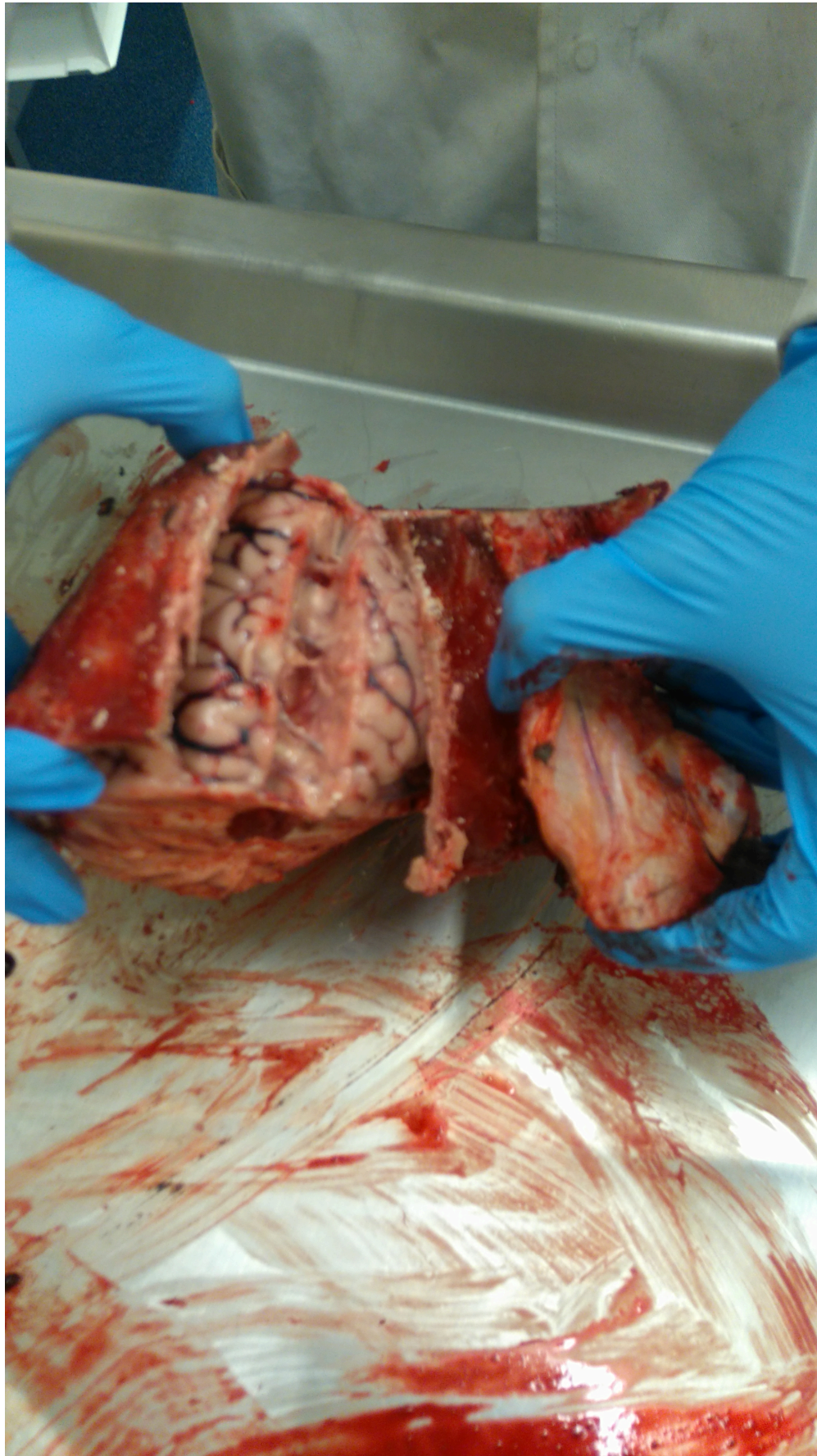
In a room at 22°C:

- Carefully place the horse head in the vertical band saw
- Cut the section that encloses the braincase: from the occipital bone to the beginning of the frontal bone.
- Permanently irrigate the bone with saline solution.

At least two people should be involved in this part of the process

Braincase defleshing

2

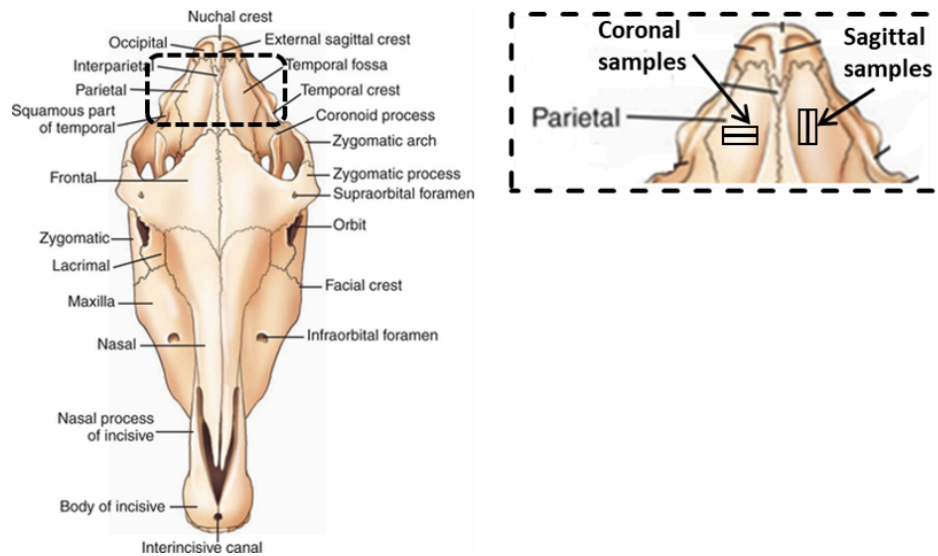


In a room at 22°C:

- Using a scalpel, carefully remove soft tissue removed from the bone.
- Remove the soft organs attached to the inner surface of the bone (brain, cerebellum, dura mater, etc.).
- Permanently irrigate the bone with saline solution.

Pre-sampling template

3



Horse Braincase (left) and Sample template drawing in the parietal bone (right)

- With the pencil, draw a square upon the parietal bone of the skull. The dimensions should cover the surface of at least one rectangular sample: 52 mm * 12 mm (taking into account the thickness of the saw).

Note: alignment of the sample template should be done according to the direction to test.

- The rectangle size will change according to the number of samples to cut.

Sample cut

4



- Align the skull so the vertical band saw is perpendicular to the surface to cut.
- Carefully cut the individual sample following the pattern previously drawn, letting the saw go all the way through the thickness.
- Permanently irrigate the bone with saline solution

Sample storage

- 5
 - Wrap individual samples in gauze sodden with saline solution.
 - Store at 4°C.