



**SPECIES DETERMINATION OF THE FEATHERS ON NATIVE
AMERICAN WARBONNETS AND OTHER OBJECTS
FROM THE COLLECTIONS
OF THE NATIONAL MUSEUM – NÁPRSTEK MUSEUM¹**

Kateřina Klápřřová² – Josef Rajchard³ – Jan Procházka⁴

ABSTRACT: This study, straddling the boundary between ornithology and ethnography, aims to contribute to the complexity of male feathered artefacts from the North American Plains and Prairies, since information on the species composition of feathers used on ethnographic objects is not often thoroughly covered in ethnographic literature. In total, 16 bird species (or genus and family in the birds classified only into genus or family) were found in 24 objects. The majority of artefacts contained the feathers of the golden eagle, the bald eagle, the wild turkey and the Red-tailed Hawk. Feathers from other species were less represented.

The main topic of the study is research into the determination and application of the feathers used in the manufacture of Plains and Prairies warbonnets. The study also deals with the meaning of eagle feathers, which symbolised the highest honour that a warrior could obtain.

KEY WORDS: feather – warbonnets – Native Americans – Plains – Prairies – golden eagle – bald eagle

Introduction

The religions of the native inhabitants of North America pay fundamental attention to wild animals. The idea that people and animals are closely related was shown by the

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² National Museum – Náprstek Museum, Betlémské nám. 1, 110 00 Praha 1, Czech Republic; e-mail: katerina_klapstova@nm.cz

³ University of South Bohemia, Faculty of Agriculture, Department of Biological Disciplines, Studentská 13, 370 05 České Budějovice, Czech Republic; e-mail: rajchard@zf.jcu.cz (corresponding author)

⁴ Agency for Nature Conservation and Landscape Protection of the Czech Republic Administration of the Kokofínsko Protected Landscape Area, Česká 149, 276 01 Mělník, Czech Republic; e-mail: jan.prochazka@schkocr.cz

imitation of animals through clothing, pursuance and self-perception. Shirts lined with bird feathers, bird decorations used during dancing and feathers in hair were meant to give the human body the characteristics of birds (bird spirits) (Hultkrantz 1998: 28-29).

The typical attribute of the Plains inhabitants was the feathered headdresses of warriors and other feathered decorations, often representing the achievements of their holders (Newcomb 1974: 91). Thanks to their uniqueness and beauty, warbonnets became a symbol of North American Natives. This was also reflected in their considerable representation in both private and public collections at the expense of less spectacular items. These warbonnets functioned as highly prestigious warrior honours for tribe members. Distinguished warriors and leaders wore these feathered bonnets as symbols of their own personal acts of bravery or of the combined war honours of many men in their community (Hansen 2007: 169)

The Native Americans believed that they could gain the powers and other characteristics of animals by appropriating and wearing their body parts. The feathers were sometimes adjusted and combined in various styles; their number, colour, arrangement, origin (the bird species of the used feather) carried information about the owner and his acts. Generally, the importance of the feather decorations was religious, ceremonial and social.

Methodology

For the determination of the feather materials we used seven warbonnets, one war party flag, eleven arrows, two male fans and two male Peyote fans.

The feathers were analyzed using macroscopic comparison with the bird feathers from the material in the collection and information in the literature. In order to determine the anatomical localization, the material was segregated into groups of identical species and then specified by comparative material of one of the authors (J. Procházka).

Discussion

Anthropological publications on the subject of Native Americans by American authors generally deal with the construction of war bonnets from eagle feathers. Some authors (e.g. Hultkrantz 1998, Gibbon 2003, Taylor 2002 and Hansen 2007), do not specify the species of the eagle. However, numerous authors do make clear reference to the golden eagle species, from whose feathers the war bonnets were made. This is mentioned for instance by Hail (1980: 116) and R. Walker (1992: 103).⁵

In the mind of the Plains and Prairies warriors of the eighteen and nineteenth centuries there was a principle linking man and eagle. When one or more eagle feathers were worn on an Indian's head or carried as a fan in his hand they established a connection between the man and the Great Mystery.

"Wan' bali, or war eagle, known to us as the golden eagle, symbolized the ultimate recognition of a warrior's achievements in battle" (Hail 1980). It was considered the most powerful bird, combining physical and spiritual powers. For warriors, it was a symbol of powerful abilities, skills and courage. Quills from the tail of the golden eagle, which warriors gained for their heroic deeds in battle, served as visible tokens of courage and expressed the symbolic properties of eagles with which warriors identified

⁵ But the quills from the tail of the young golden eagle.....were symbolic and could be worn only by those entitled by deeds done. (Walker 1992: 103)

themselves (i.a Thom 1992 and Hansen 2007). The feathers of the bonnet were considered to contain the protective power of the eagle, which prevented men from being hit by bullets or arrows (Hassrick 1988: 86).

In museums and in professional literature, however, one can also find bonnets that were made of quills of different types of eagles or from quills of other birds (Whiteford 1970).⁶ An answer is given e.g. by J.R. Walker (1992), who provides a general definition of the bonnet.⁷ Like most authors, Walker emphasizes that only the quills from the tail of the young golden eagle could be used for the warbonnets, mirroring the brave deeds of warriors.⁸ It follows that it is necessary to distinguish between warbonnets and bonnets in general.

The aim of this article is to verify, based on a sample, from the ethnographic collections, of seven Native Americans bonnets deposited in the National Museum-Náprstek Museum, how many of them were mostly made of golden eagle feathers and to what extent they contain also quills of other species of eagle or even quills of other birds of prey. A problem is that our set of seven bonnets does not provide a representative sample, and therefore the conclusions are only partial. Moreover, we do not know exactly dates of origin of the Náprstek Museum warbonnets being evaluated. Commercial felt hats were commonly used as skull caps inside bonnets after 1850. Based on this fact we can assume that the bonnets deposited in the Náprstek Museum were made from the second half of the nineteenth century to the beginning of the twentieth century.⁹ At this time the application of eagle feathers may have changed significantly, so that the bald eagle began to be used in a balanced ratio with the golden eagle.

The determination of the feathers used for the items in question confirmed the use of feathers of the following birds of prey: the bald eagle (*Haliaeetus leucocephalus*), the red-tailed hawk (*Buteo jamaicensis*), the ferruginous hawk (*Buteo regalis*), the hen harrier (*Circus cyaneus*) and the northern goshawk (*Accipiter gentilis*).

The feathers of the Eastern screech owl (*Otus asio*) were also represented. The feathers of the wild turkey (*Meleagris gallopavo*)¹⁰ were identified on arrows, on the male fan Inv. No. 22.224 and one feather (the commander feather) was found in the headdress crown Inv. No. 44.608. The common pheasant (P. c.) feathers formed part of the Peyote fan Inv. No. 59 299. Its presence is an interesting illustration of the use of material from a non traditional, non autochthonous species newly introduced to the American continent. The colouring and shape of the pheasant feather perhaps attracted the decoration makers, who used it for their products despite the tradition.

The appraisal

The most frequently represented species in terms the number of the objects were (in descending order) the golden eagle, the wild turkey, the red-tailed hawk and the bald eagle. If the concrete species was not determined, the genus or the family was used

⁶ On this issue, see e.g. Whiteford (1970), who has concluded that the bonnets could have been made of the quills of eagles as well as of hawks and owls without further species determination.

⁷ The bonnet was a close-fitting cap without a brim. ... They might be embellished with the quills and feathers of any birds, or furs of any animals. ... Walker 1992: 103)

⁸ None but warriors were permitted to embellish their bonnets with the white, black-tipped eagle quills (= quills of golden eagle) (ibidem).

⁹ The earlier warbonnets had the inner skull caps made of deerskin.

¹⁰ Turkey never been domesticated in the Plains and Prairies area.

instead. In terms of the types of feathers or skin with feathers, in most cases the following were used: secondaries (33 %), rectrices (27 %), lesser upper wing coverts (17 %) and primaries (6 %). The modified primaries of a bird of the genus *Corvus* were used as components of the headdress Inv. No. 59.019. There were less numerous (1-5 feathers of each kind) occurrences of the feathers of the sage grouse (*C.u.*) in the headdress Inv. No. 59.019 and a bird of the family *Picidae* in the Peyote fan Inv. No. 59.333.

Conclusions

1. Most bonnets deposited in the Náprstek Museum were primarily made of eagle feathers. The results of ornithological analyses have shown that only three bonnets (Inv. No. 44 607, Inv. No. 44 611 and Inv. No. 59 019) were made of golden eagle feathers, part of an impressive set of warrior equipment – truly prestigious warbonnets. The other three bonnets (Inv. No. 11938, Inv. No. 44 608 and Inv. No. 44 609) were made of bald eagle feathers, which were probably the second most important in warbonnet creation.
2. The last bonnet (Inv. No. 44610) was made of a ferruginous hawk and red-tailed hawk feathers. It seems that this great bonnet was a late product from the reservation period, made only as a reminder of former glory with no ambitions to be a highly prestigious object. It is known that the bonnets were also used in the reservation period as identity objects through which Native Americans defined themselves with respect to the outer world.
3. For the production of the above mentioned objects, Plains and Prairies Native Americans in most cases used the feathers of the golden eagle (*Aquila chrysaetos*), the bald eagle (*Haliaeetus leucocephalus*), the red-tailed hawk (*Buteo jamaicensis*) and the wild turkey (*Meleagris gallopavo*).
4. The warbonnets were predominantly made of the feathers of the golden eagle and the bald eagle. The golden eagle was of paramount importance according to the literature, but in the second half of the 19th century the bald eagle was probably used for the same purposes.
5. The feathers of the bald eagle were used for prestigious war objects, as is also shown by the use of bald eagle feathers on the flag of the war party leader Inv. No. 22.252.
6. On the top of the internal hat of the warbonnets other feathers of birds of prey were applied: the red-tailed hawk (*Buteo jamaicensis*), the ferruginous hawk (*Buteo regalis*), the northern goshawk (*Accipiter gentilis*).
7. For the production of hunting arrows, the feathers of the wild turkey were most often used. On two arrows Inv. No. 21 826 and Inv. No. 21 838 the quills of the golden eagle were used – which suggested the possibility that these two arrows were made for warfare purposes.
8. Regardless of the species determination, the feather types most used were the following: secondaries 33 %, rectrices 27 % and lesser upper wing coverts 17 %.
9. 16 bird species (genus and families in birds with determination only into genus or family) were found in total on the 24 objects; the majority of items consisted of the feathers of the golden eagle, bald eagle, the wild turkey and the red-tailed hawk.
10. The sporadic use of the feathers of the common pheasant (*Phasianus colchicus*), which in America is an allochthonous, introduced species, was proved. Feathers of this species were found in one of the Peyote fans.

Results



1 Inv. No. 11.938

Swept back bonnet without browband or headband, Great Plains, beginning of the twentieth century.

H.: 45 cm; hat rim diameter 24.5 cm

The bonnet was made of rectrices of subadult bald eagle - on each side there are four such feathers, on the forehead side and on the back side there are seven rectrices, and nine rectrices. Seven feathers on the forehead side and seven on the back side were dyed red. A grey commercial felt hat is used as a skull cap. The commander feather of the secondary of an adult golden eagle rises from centre of its top. The ear drapes on both sides were made of five rectrices of a Hen Harrier.

2 Inv. No. 44.607

Swept-back bonnet, browband or headband of loom-beaded seed beads. Probably Yankton or Eastern Sioux (?) Plains or Prairies, the nineteenth century.

H: 40 cm; hat rim diameter 20 cm

The bonnet was produced from 26 whole rectrices of a juvenile golden eagle. A grey commercial felt hat, used as a skull cap. The "commander feather", a primary of the



juvenile golden eagle is attached to the crown of hat, rising above the feather circle. On the top of cap, around the "commander feather", there are sewn two greater underwing coverts, six small lesser upper wing coverts, one skin fragment probably with a rump feather and one skin fragment probably with a breast feather, all of the same bird species. On either side of the head band are attached pendants of red, white and grey silk ribbons.



3 Inv. No. 44.608
Swept-back bonnet, browband with loom-beaded seed beads. Sioux, Great Plains, end of the nineteenth century.

H: 43 cm; hat rim diameter 23 cm

The bonnet was made of thirty-two secondaries of the juvenile bald eagle. Grey commercial felt hat, used as a skull cap. The "commander feather", a primary of a wild turkey is attached to the top of the hat. The ear drapes on both sides were made of several strips of weasel fur and one beaded drape.

4 Inv. No. 44.609

Swept-back bonnet, browband with loom-beaded strip. Southern Plains, end of the nineteenth century.

H: 40 cm; hat rim diameter 24 cm



The bonnet was made of ten rectrices on the forehead side, ten secondaries on one side and eleven on the other side, the drapes on the back side consisted of two secondaries, the left ear side was made of three secondaries of a juvenile bald eagle (one whole and two clipped), the right ear side of drapes consisted of one whole rectrice and one half clipped feather of a juvenile golden eagle and of one clipped half feather of a bald eagle. A black, commercial felt hat, used as skull cap. Drapes of brass pearls have been added on both sides.



5 Inv. No. 44.610

Stand-up bonnet, single trail, browband trimmed with two rows of seed beads in lazy stitch. Probably Cheyenne, Great Plains, end of the nineteenth century or beginning of the twentieth century.

H: 40 cm; L: 180 cm; hat rim diameter 25 cm

This large bonnet was made using twenty-two secondaries and eight rectrices of a ferruginous hawk in the headdress, forty-one secondaries of a ferruginous hawk and nine secondaries of a red-tailed hawk in the trail and twenty-four greater underwing coverts of a golden eagle secured on large tail in pairs. The ear drapes on both sides of the skin skull cap were made of ten rectrices of an adult red-tailed hawk and ten rectrices of a juvenile red-tailed hawk in the lateral drapes. The crown is decorated with fifteen lesser upper wing coverts of a juvenile golden eagle.



6 Inv. No. 44.611a,b

**Swept-back bonnet, browband
trimmed with strip of loom-
beaded seed beads. Great Plains,
end of the nineteenth century.**

H: 43 cm; L: 205 cm

The headdress was made of twenty secondaries, twenty lesser upper wing coverts and five downy feather of a juvenile golden eagles.

For the production of the headdress trail, twenty-nine secondaries of a subadult golden eagle were used. A dark red commercial felt hat, used as a skull cap.



7 Inv. No. 59.019

Swept-back bonnet, browband is trimmed with four rows of seed beads in lazy stitch. Teton Sioux type. Great Plains, end of the nineteenth century.

H: 58 cm; hat rim diameter 28 cm

The whole headdress was made of thirty-one primaries of an adult golden eagle, the left side of the ear drapes consisting of one primary feather of a juvenile golden eagle and four primaries of a

red-tailed hawk. A light brown commercial felt hat, used as a skull cap. To the inside part of the headdress on the top of the hat were attached five rectrices of a sage grouse, eleven secondaries of a red-tailed hawk with shafts of which only the top terminative parts of the feathers were kept, five primaries of a bird from the genus *Corvus* (only the terminative parts of the feathers were kept), three secondaries of a bald eagle and two secondaries of a golden eagle, all of them also with a shaft on which only the top terminative parts of the feathers were kept.

8 Inv. No. 22 252

Flag of the war party leader. Santee Sioux, Prairies, first half of the nineteenth century.

The upper part of the flag was made of five rectrices from the bald eagle and then alternately of secondaries and of rectrices from the same species (some feathers are missing).

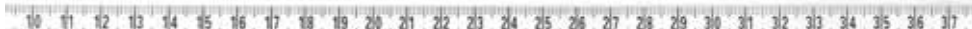




Inv. No. 21 832



Inv. No. 21 833



9–19 Inv. No. 21 825, 21 826, 21 827, 21 829, 21 830, 21 832, 21 833, 21 834, 21 835, 21 836, 21 838

Arrows, Santee Sioux, Prairies, first half of the nineteenth century

The half feather of a wild turkey was used for arrows number 21 825, 21 827, 21 829, 21 830, 21 832, 21 833, 21 835 and 21 836. One and a half feathers of a juvenile golden eagle was used for arrow number 21 826. For the production of arrow number 21 838, one and a half feathers of a subadult golden eagle was used. Arrow number 21 834 was made of one feather of a wild turkey and a half of a non-determined feather (as the feather is in a bad state).

20 Inv. No. A 8 347

The arrow was decorated with two secondaries of a red-tailed hawk.



21 Inv. No. 22 224

Male fan, Santee Sioux, Prairies, first half of the nineteenth century

The fan was made of about 33 rectrices of a wild turkey; the feathers are in a bad state.

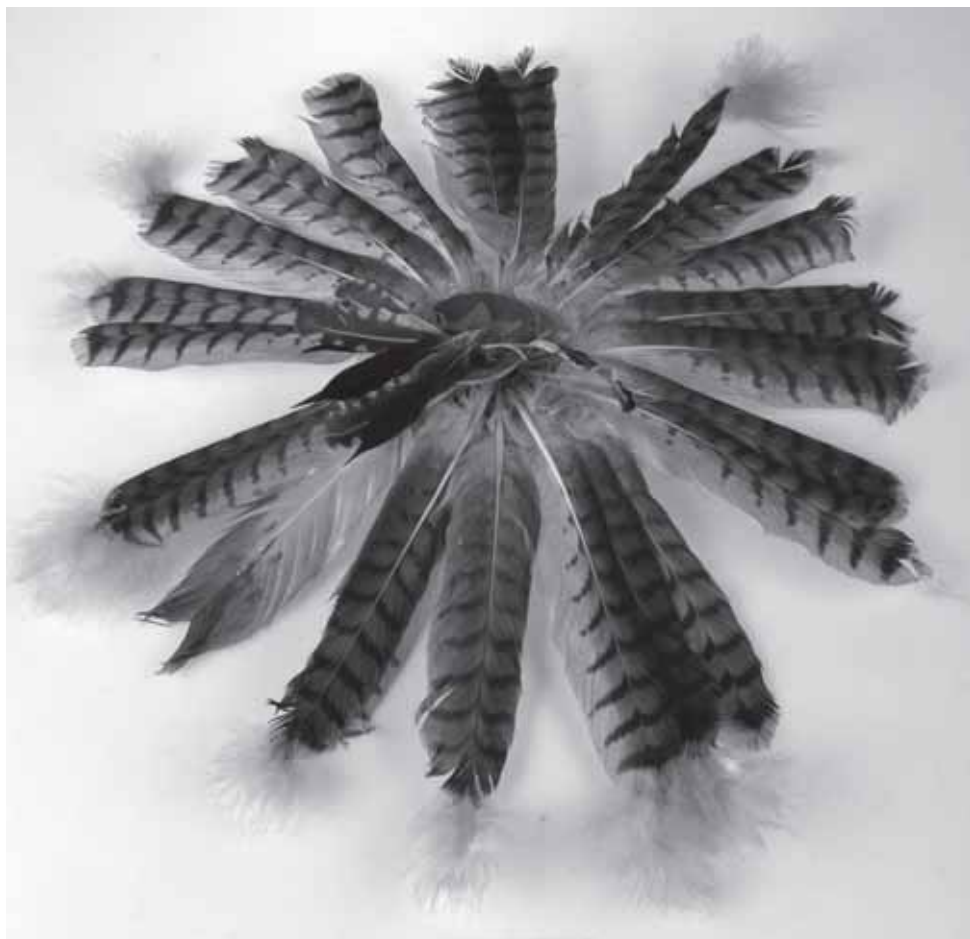


22 Inv. No. 22 242

Male fan, Santee Sioux, Prairies, first half of the nineteenth century

H: 47.5 cm; W: 25 cm

The male fan number was made of about 33 rectrices of a wild turkey; the feathers are in a bad state.



23 Inv. No. 59333

Peyote fan, Southwest or Southern Plains, first half of the twentieth century

Diameter 50 cm

The fan was made of one greater underwing covert of a subadult golden eagle, nineteen rectrices of a red-tailed hawk, four secondaries of an American kestrel and three rectrices of a non-determined bird of the family Picidae.



24 Inv. No. 59299

Peyote fan, Southwest or Southern Plains, first half of the twentieth century

Diameter 66 cm

The second fan was made of twelve clipped rectrices of a common pheasant, twelve clipped primaries of a small species owl, probably the Eastern screech owl, twelve clipped primaries of a red-tailed hawk and thirty-six underwing coverts of a red-tailed hawk, dyed red or violet.

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