

**THE BONEWELL SPRING (ENGLAND) IN
VALVASOR'S "DIE EHRE DESS
HERZOGTHUMS CRAIN" (1689) - THE AU-
THOR'S SOURCES**

**IZVIR BONEWELL (ANGLIJA) V VALVASORJEVI
"SLAVI ... (1689) - AVTORJEVI VIRI**

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Izvleček

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Shaw, Trevor R.: Izvir Bonewell (Anglija) v Valvasorjevi "Slavi ... (1689) - avtorjevi viri

Bonewell (Bone Well ali Boney Well), ki ga omenja Valvasorjev sodelavec Erazem Francisci v Die Ehre dess Herzogthums Crain, je izvir iz apnenca, ki je naplavljal kosti žab. Avtorjev vir, J. C. Becmann, ga navaja po knjigi Britannia (izdaja 1607) angleškega topografa Williama Camdena.

Ključne besede: krasoslovje, kraška hidrologija, kraški izvir, zgodovina krasoslovja, Anglija, Bonewell.

Abstract

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Shaw, Trevor R.: The Bonewell Spring (England) in Valvasor's "Die Ehre dess Herzogthums Crain" (1689) - the author's sources

The Bonewell (Bone Well or Boney Well), referred to by Valvasor's collaborator, Erazem Francisci, in Die Ehre dess Herzogthums Crain, is a limestone spring from which frog bones used to be washed out. The author's stated source, J. C. Becmann, obtained his information from the 1607 edition of the book Britannia by the English topographer William Camden.

Key words: karstology, karst hydrology, karst spring, history of karstology, England, Bonewell.

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In reviewing karst phenomena in parts of the world outside Slovenia, Die Ehre dess Herzogthums Crain (Valvasor 1689) refers to "Der Beinlein, Brunn in Engeland":

In einer Englischen Provintz Herford-Shire bey Richards Castle (oder dem Schloss Richardi) findet man einen Brunnen welchen die Innwohner the Bonewell, (die Bein = Quelle) zu nennen pflegen; selbiger schwimmt voller Beinlein welche denen so man in den Fröschen findet nicht ungleich sehen und wann man sie gleich alle heraus nimt so ersetzt sie doch der folgende Tag wieder in voriger Menge. (a)

(a) J. C. Bechmannus, Historia Orb. Terr. Part 1. Cap III 4

In the English county of Herefordshire, near Richards Castle one finds a spring which the local people call the Bonewell; the same flows full of small bones which are not dissimilar to what one finds in frogs and when they are all taken out it replaces them the following day in the same quantity.

This passage is one of the several in Valvasor's book, providing background for phenomena in Slovenia, that were written by his collaborator and editor Erazem Francisci (Baraga 1990).

What is this spring? How did knowledge of it reach Valvasor? And were bones really present in the water?

THE SPRING

The spring known as the Bone Well or Boney Well is about 5 km south-west of the town of Ludlow at latitude 52°19'43" N and longitude 2°45'48" W, more conveniently located by the National Grid Reference, SO 481703 (Fig. 1).

Richard's Castle, now ruined and all but disappeared, is one of the earliest castles in England, being built about 1050 AD. The village near it is also called Richard's Castle.

The standard account of springs in the county of Herefordshire (Richardson 1935) describes the Bone Well as "a strong overflow spring from the top of the Aymestry Limestone where it disappears beneath the [impervious]... Upper Ludlow beds" of the Upper Silurian period. Richardson also states that "From the collecting chamber near the spring the Manor House, Batchcott, the rectory and church are supplied by gravitation. A pipe also leads to Moor Park and several cottages." All these are shown on the map (Fig. 1) and most of them are many centuries old or have replaced older building on the same sites. The spring is now usually known as Boney Well, as printed in the official maps of the Ordnance Survey since the 19th century.

The volumetric output of the spring is not known, but the National Rivers authority has authorized the use "of a maximum of 2250 gallons (10,23 m³) per day and not more than 821,250 gallons (378,5 m³) in any calendar year for domestic and agricultural use on the estate" (Abstraction Licence No. 18/54/9/5; Catherine Bason of the National Rivers Authority, pers. comm.). The present landowner, Sir Humphrey Salwey, states that the spring currently supplies seven house and is also used for providing water for livestock.

VALVASOR'S SOURCES

As Francisci (in Valvasor 1689) acknowledges, his immediate source was a book by Johann Christoph Becmann. This was first published in 1673, and the extract below is taken from the 2nd edition of 1680. The description there, and in the 3rd edition of 1685, is almost word for word the same as the text in Valvasor's book, except for being written in Latin. It is not known which edition Francisci used.

In Herford-shire, Provincia Angliae prope Castellum Richardi, Richards Castle, Fons est Fons Ossium, the Bonewell, communiter dictus, quod Ossiculis fluat, iis quae in ranis sunt non dissimilibus, quibus etiam, si examinantur omnia, seqventi die eadem copia scatet.

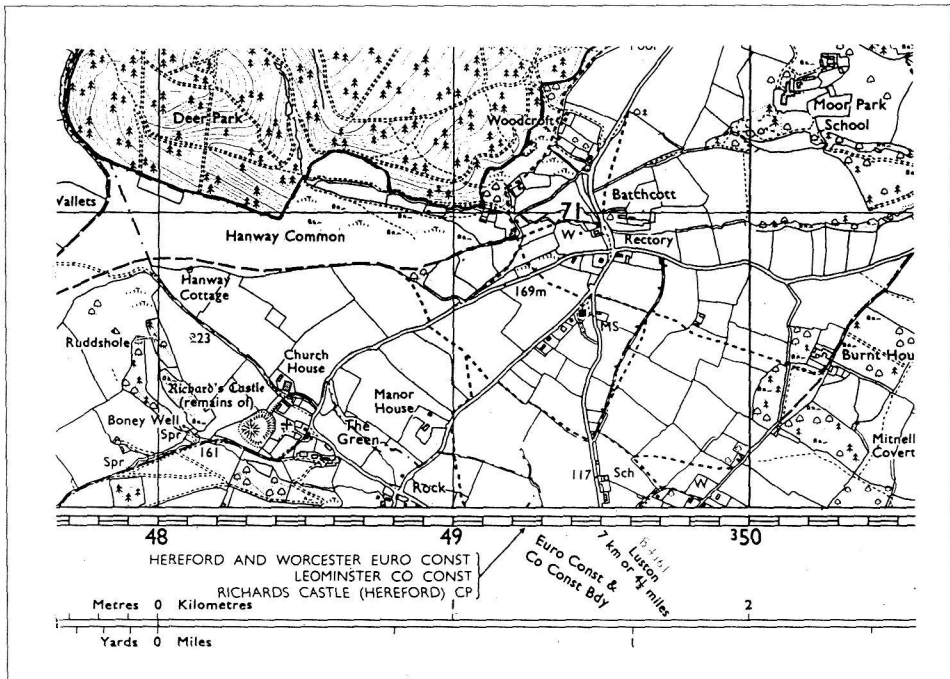


Fig. 1 - The surroundings of the Boney Well (Bone Well) at Richard's Castle
Sl. 1: Lega izvira Boney Well (Bone Well) pri Richard's Castle.

In the English county Herefordshire, near Richards Castle, a spring is commonly called the Bonewell, because small bones flow out from it, to which those of frogs are not dissimilar, which if they are all [removed &] examined, gush out the next day just as abundantly.

Becmann, in turn, undoubtedly derived his basic description from Britannia of William Camden, a pioneering topographical survey of the British Isles first published in 1586 and the source of very many subsequent descriptions of places in England. Valvasor does include "Camdenus" (no date) in the list of works consulted but, as has been seen, it was Becmann's book that was acknowledged as the source of the Bonewell information.

When Britannia was first published, the text concerning the Bone Well was as follows:

Richards Castle... Sub quo natura quae nusquam magis quam in aqua miraculis ludit, fonticulum eduxit pisciculu ossiculis semper scatentem, quamuis subinde exhauriantur, vnde Bone Well vocitatur.

Mentioning fish bones only. However Camden continued to modify and add to the book until 1607, in which year the much enlarged 6th edition was issued. Here it is that the alternative of frog bones is first mentioned:

Sub hoc, natura quae nusquam magis quam in aqua miraculis ludit, fonticulum eduxit pisciculorum (vel vt putant ranularum) ossiculis semper scatentem, quamuis subinde exhauriantur, vnde Bone Well vocitatur.



Fig. 2 - The Bone Well about 1833 (reproduced from Murchison 1839, p. 250). The date is deduced from information in Thackray (1978)

Sl. 2: Bone Well okoli 1833 (reprodukcija iz Murchisona 1839, str. 250). Letnica je določena po navedbah v Thackrayovem delu (1978).

A contemporary English translation is that of Philemon Holland (Camden 1610):

Beneath this castle, Nature, who no where disporteth her selfe more in shewing wonders, then in waters, hath brought fourth a pretie well, which is alwaies full of little fish bones, or as some thinke, of small frog-bones, although they be from time to time drawne quite out of it, whence it is commonly called Bone well.

A more easily understandable translation is the one by Bishop Edmund Gibson (Camden 1695):

Beneath this Castle, Nature (which no where sports her selfe more in shewing wonders than in the waters) hath brought forth a little Well, which is always full of small fish-bones (or as others think, small frog-bones) notwithstanding it is ever now and then emptied and clear'd of them; whence 'tis commonly call'd Bone-Well.

OTHER DESCRIPTIONS OF THE BONE WELL

Brief reference was made to the Bone Well in Michael Drayton's topographical poem *Polyolbion* first published in 1612:



Fig. 3 - The Bone Well photographed on 30 April 1993. The collecting chamber made of brick can be seen

Sl. 3: Slika Bone Wella posneta 30. aprila 1993. Viden je zbiralnik iz opeke.

... with strange and sundry tales, Of all their wondrous things; and not the least, of Wales; Of that prodigious Spring (him neighbouring as he past) That little Fishes bones continually doth cast.

Although not containing sufficient information to be Becmann's source, this reference to the spring is an early example of how, once a place of phenomenon had been described by Camden, it appeared again and again in later literature, in England and elsewhere, no matter how small its real importance. Many, including the Bone Well, continued to attract attention because of their curiosity value.

It is not surprising that local guide books to the region noticed the spring. One of the earliest of these (Anon. 1811) adds the fact that the appearance of the frogs' bones "happens at two particular seasons of the year only, viz. March and September" and the writer supposed that "the coldness of the water first killed the frogs, and then destroyed and dissolved the flesh".

The distinguished geologist Sir Roderich Impey Murchison (1839) had a small box of bones from the spring examined and they were identified as being exclusively of frogs, with no fish bones at all. The illustration reproduced here as Fig. 2 is taken from Murchison's book and the place is hardly changed today except that it is overgrown with vegetation (Fig. 3). He writes:

The water issues from one of the joints before described, and as this joint is doubtlessly connected with many other similar open cracks, which ramify through the higher slopes of the ridge, we can easily comprehend how the minute bones or frogs or even of mice, living and dying on the adjacent hills, should from time to time be washed down through connecting fissures and discharged at the first natural source wide enough to afford them egress; their occasional issue depending on floods, sudden thaws, and such causes.

EXPLANATION OF THE BONES

Wolfgang Zeuner (pers. comm.), a geologist living in the area, agrees that "Murchison was right. The explanation is that frogs got into fissures further upstream and died, and in times of flood, i. e. spring and autumn, their clean bones were washed down and settled out. Nowadays there are not enough frogs, sadly, so no bones despite an adequate water flow".

The present writer collected two very small bones from just outside the overflow of the collecting chamber in April 1993. Although they could have come from elsewhere, the spring is their most likely source. They were identified at the Natural History Museum in London (A. P. Curren, pers. comm.) as a very small bird femur and a fragment of a limb bone, possibly a femur, of a small mammal about the size of a Short Tailed Field Vole (*Microtus agrestis*) or Wood Mouse (*Apodemus sylvaticus*).

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Povzetek

Opis kraškega izvira Bonewell, ki ga opisuje Valvasorjev sodelavec Erazem Francisci v *Die Ehre dess Herzogthums Crain*, je takorekoč neposredni prevod odlomka iz dela J. C. Becmanna *Historia Orb. Terr.* (1673), ta pa ga je povzel po knjigi *Britannia* (izdaja 1607) angleškega topografa Williama Camdena.

Izvir Bonewell je jugozahodno od mesta Ludlow (Herefordshire), pri vasi Richard's Castle, ki ima ime po enem najstarejših angleških gradov. To je relativno močan (do 10,23 m³ dnevno) prelivni kraški izvir, zajet za nekaj posestev, za župnišče in nekaj kmetij. Ime je dobil po tem, da, kot navajajo stari viri, voda nanaša koščice žab - če se jih pobere iz vode, jih voda takoj spet nanese. Znani geolog R. I. Murchinson (1839) je zbral koščice in jih določil kot žabje. Tudi današnji raziskovalci se strinjajo s tem, da so se žabe zalezle v razpoke ob vodi navzgor in ko so poginile, je voda nanašala njihove obeljene kosti. Žal danes ni več toliko žab in voda njihovih kosti ne nanaša več.