Comment

Further cases of proven rubella re-infections in pregnancy with details of the outcome for the infant need to be collected in order to reassure patients that rubella re-infection either after natural infection or immunisation need not be an indication for termination of pregnancy.

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REFERENCES


History of Medicine

The healing bird

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Summary

The legend of the caladrius, a bird with prognostic and healing powers, first appeared in early Indian writings as the haridruva — a yellow bird that cured jaundice. In classical Greek mythology it was a nondescript bird but in the medieval bestiaries it became pure white. The caladrius is used in the coats of arms of the South African Medical and Dental Council and also the Medical University of Southern Africa. These appear to be the first use of this medically significant bird in modern heraldry.


'...another kind of flying animal called the charadrius mentioned in Deuteronomy which is entirely white with no black part at all. His excrement is a cure for those whose eyes are growing dim and he is found in the hall of kings. If someone is ill, whether he will live or die can be known from the charadrius. The bird turns his face away from the man whose illness will bring death and thus everyone knows that he is going to die [Fig. 1]. On the other hand, if the disease is not fatal, the charadrius stares the sick man in the face and the sick man stares back at the charadrius, who releases him from his illness [Fig. 2]. Then flying up to the atmosphere of the sun, the charadrius burns away the sick man's illness and scatters it abroad.'

— Physiologus

Fig. 1. The caladrius — foretelling unfavourable outcome (British Museum).

Fig. 2. The caladrius — foretelling recovery (British Museum).
The significance of this therapeutic, if occasionally alarming, bird is that it forms part of the coats of arms of, among others, the South African Medical and Dental Council and the Medical University of Southern Africa. In an attempt to find out more about this prognostic bird, two main sources of reference formed the basis of this research. Druce undertook intensive study of manuscripts in the British Museum; the Bodleian Library, Oxford; the British Library, London; the British Museum Library, South Kensington; and other libraries and museums, while Huizinga concentrated on manuscripts in the Netherlands, Germany and other European sources.

The name caladrius is a debased form of the Greek Χαράξλριον, which is derived etymologically from Χαράξλρα, a mountain stream or torrent that, when swollen, cuts its way through the mountain-side, forming a cleft or ravine, hence the cleft itself, and from it Χαράξλρας, a bird dwelling in such clefts or ravines. Caladrius is the accepted English version although various derivations such as ‘chaladrius’, ‘charadrius’, ‘charadrius’, ‘charddrios’, ‘caladres’, ‘calandre’, ‘klaadrius’ and ‘kaldare’ are used by some authors.

Classical Greek

Alexander the Great (356 - 323 BC) is credited with being the first person to tell the Greeks about the caladrius in a letter from Persia to Aristotle (384 - 322 BC). Among the many marvels found in the palace of King Xerxes (519 - 465 BC) were birds the size of doves, called salandres, which prophesied about a sick person — whether he was going to die or not. No colour of the bird was mentioned in the fourteenth century medical romance of the history of Alexander, but one manuscript depicted it as blue with a reddish beak and legs not unlike a parrot in appearance. Other manuscripts depicted the bird in nondescript colours such as fawn and light grey. Druce quoted from Julius Zacher's Physiologus, a letter written by Alexander to his mother Olympias. He described a golden house in which the king gave his audience, from the roof of which hung down a golden cage in which a gold-coloured bird like a dove was alleged to prophesy to the king. Alexander was dissuaded from sending Olyrnpias because it had a holy significance.

Aristotle in his History of Animals associated the caladrius with sea- or water-birds and later with making its dwelling around mountain torrents and in cliffs in holes in the rocks. He described it as inconspicuous both in colour and song and said that it comes out at night hiding itself during the day. Aristophanes (444 - 380 BC) in The Birds mentioned the caladrius twice: '... did the hoopoe go into the thicket and utter its cry in imitation of the charadrius' and then later classified it with the water-birds '... the charadrie and other river-fowl have water from below into the air'. Plato (428 - 387 BC), on the other hand, employed the caladrius to illustrate the life of a glutton and in consequence it is held to be a greedy and ravenous bird. Siudas (12th century), quoting from earlier writers in his Lexicon, described it as a maritime bird, great and greedy and possessed of such power that if those afflicted with jaundice gazed at it they were freed from their complaint. Pliny the Elder (AD 23 - 79) did not mention the caladrius but wrote about a bird known as the iteraria from its peculiar colour; if a patient looked at it, he would be cured of jaundice, and the bird would die. Kiranides, pseudonym of Persia, in Physico-Medicus said nothing about the colour of the caladrius but noted its prophetic powers and added that if its heart and head were carried on the person they preserved the bearer safe and sound from all sickness as long as he lived. Druce stated that this is the only reference to its employment as an amulet.

The earliest Greek reference to the caladrius appears to be that by Hippocrates (460 - 420 BC), a writer of iambics, who originated the proverb ‘imitating the charadrius’, which was said of those who hid anything. The proverb arose from Hippocrates words: ‘Why, he is hiding it: like a man with a charadrius to sell.’ T. H. White wrote in a footnote that the diagnostic value of the caladrius caused it to be a troublesome commodity for the bird-seller because an ailing purchaser had only to enter a bird-shop, ask to see a caladrius, note whether it looked at him or away, and then — making some excuse about the purchase price — go away with all he wanted to know. The result was that few dealers were willing to display their goods without cash down, a fact that might account for the difficulty in identifying this particular bird.

In the list of clean and unclean flesh that might or might not be eaten in a seventh century version of the Septuagint (Old Testament), the caladrius was classified under unclean flesh in Leviticus (11:19) and Deuteronomy (14:18). Unclean birds, for the most part, were birds of prey or those which fed on carrion. This appears to be a mistranslation of the Hebrew word for heron, which is listed in the place of caladrius in all English translations.

Indian origin

Huizinga attributes the origin of the fable of the medical qualities of the caladrius to the Veda. This is the ancient sacred literature of India and consists of four collections of hymns meant to be used at sacrifices. The oldest is the Rigveda, which contains poems from which the earliest information about the Aryans is derived. Another is the Athar­veda, consisting of charms and incantation, which is the principal source of knowledge of the popular beliefs and superstitions of ancient India. In both of these books mention is made of the haridrava, a bird which gave charms and incantations for sick persons to heal themselves. 'In the haridrava your yellowness is removed — one or more of the yellow birds were tied to the sick bed with yellow thread so that jaundice could be transferred to the birds.'

The haridrava of the Veda, a yellow bird that cured jaundice, became the salandre, the dove-like bird that prognosticated, or the golden bird of prophecy of King Xerxes, then changed to the nondescript colour of the charadrius of classical Greek that combined both the curing of jaundice and the foretelling of the fate of the patient.

The bestiary

The first description of the caladrius as being all white appears in Physiologus,1 the original bestiary written in Greek in the 3rd or 4th century. There are many translations of Physiologus into Latin and other languages. The original listed 25 - 30 creatures and was probably inspired by Aesop's fables. The bestiary has been described as a religious unnatural natural-history book incorporating a symbolic method of Christian teaching using the appearances and habits of animals (both real and imaginary) as allegory and moral lessons. Later versions of the bestiary varied considerably from the original and some contain as many as 200 creatures through constant addition of fresh subjects and matter. The illustrations (miniatures) in many of these manuscripts were, as a rule, done after the text had been written and by a different person, who probably had never seen many of the animals described. Pope Gelasius condemned Physiologus as a heretical book in a decree of AD 496, but this did not seem to have much effect for its popularity continued until the 14th century. By the late 12th and 13th centuries the bestiaries were the most popular books of their day. The Western Middle Ages conceptualised a universe of symbols in which, with the sole exception of God, everything could signify something else. This was the age of...
allegory and the bestiaries were full of this form of moral teaching.

In *Physiologus* the caladrius is described as a completely white bird without a speck of black, and represented Christ with no sin in Him. The act of looking away from or towards the sick person came to represent Christ turning away from the Jews and towards the Gentiles. The act of taking the illness from the mouth of the sick person (in later bestiaries) represents Christ taking upon Himself the sins of humanity, and flying towards the sun represents His ascension into heaven. The fact that the caladrius, which was unclean according to the law, could represent Christ posed no problem to the bestiary compilers. They got around this by quoting that the serpent was unclean yet the Lord said: 'And as Moses lifted up the serpent in the wilderness, even so must the Son of Man be lifted up' (John 3: 14). Many animals in the bestiaries were given two-fold characters — the praiseworthy and the blameworthy.

Many of the bestiaries also described a curative property of the caladrius for dimness of vision or blindness. In *Physiologus* this is attributed to the bird's excrement and this explanation was copied by some bestiaries while others, notably that of Canon Philip de Thaon of Waltham, described the snow-white bird as having a thigh bone of great size and that a salve from its marrow could restore sight to a blind man. Drucé attributes this variation to a copyist inadvertently changing the Latin *femur* to *fimus*, and quotes from Conrad Gesner's (1516 - 1565) *De Avibus* (Edition: Frankfurt, 1585): 'Some little-known person, quoting Aristotle falsely, adds that this bird has a thick bone in its leg: and the marrow of it promotes clearer vision, the sight of whose eyes is getting dull, if anyone smears it over them.' Pliny the Elder and others described the use of fat or marrow and dung of various animals and birds as a liniment or ointment for the eyes and this may well have led to the confusion.

The caladrius

Whether the caladrius was a distinct species of bird or not is unclear. Alexander described it as being like a dove in size and golden in colour, some authorities averred it was a golden oriole, whereas the classical writers classed it as a sea- or water-bird, varying from a seagull to a heron to being swan-like, and one account described it as web-footed. Most early accounts stated that the caladrius had a long neck with which it sought food out of the very bowels of the earth or the bottom of the sea and for this reason it was considered unclean and not be eaten and, because of its rapacity and greed, it was not to be imitated. The 13th century bestiariist, Bartholomew the Englishman, wrote that the caladrius was other than the 'byrde that hight Calandra, that syngeth as a thrustelle'. Possibly the latter bird, which must be similar to the caladrius, is the calandra lark. Various interpreters of the bestiaries and earlier works have identified the caladrius as the plover, the lapwing, the crane, the woodcock, the white wagtail, the heron and the parrot. A latter 13th century Picardy bestiary describes and portrays the caladrius as all white with two straight horns like a goat.

Most miniatures depict a patient in a palatial room with rich bed drapes and wearing a crown. This is likely to be due to jaundice being called *morbus regis* or royal disease or sickness, either because those who lived in palaces were more prone to jaundice because of the rich food and lifestyle or because it was cured by the king's touch. Alexander found the caladrius in the palace of King Xerxes and Serenus Salomonicus (a physician who lived in about AD 216) wrote: 'The royal disease is significant by this name, because it must be cured luxuriously in the halls of the great,' both of which suggested to the artists and compilers the need for richness in their description of the caladrius. Celsius, the physician, prescribed the remedy against jaundice thus: 'The patient has an elegant chamber, company, change of scene, frivolity, and everything else that tends to keep up the spirits — which things are the daily pleasures of kings.'

All miniatures either show the caladrius looking at the vicim, who appears to be cheerful, or with its head turned away from a very miserable, dejected looking person. Some also show the caladrius flying away from the person in the act of carrying the illness away. Some miniatures depict both favourable and unfavourable outcomes either in the same room or in separate panels. With few exceptions, the caladrius is completely white and is a large bird, probably due to artistic licence, relative to the patient. Some depict the beak of the bird touching the patient's cheek or more uncommonly with its beak on the patient's mouth.

There appear to be only two examples of the caladrius in other art forms. One is sculptured in stone — the fifth stone in the outer moulding of the 12th century doorway on the south side of the nave of the village church of St Mary's at Aline, about 30 km from the City of York. This particular stone has worn badly but it is still possible to make out the details. A man lies supine with his head, which appears to rest on a stool, towards the viewer. The bird is very large and out of proportion to the other details, presumably because of artistic licence. The bird's beak rests on the man's cheek. The folds of the coverlet on the couch suggest that it is made of rich material.

The other example is in the border of a 13th century lancet window in the apse of the cathedral of St Jean-Baptiste in Lyon, France (the Reverend Pierre Martin - personal communication). The central stained glass of the apse is called the 'Redemption window' and is made up of seven main medallions depicting the story of the Redemption. Each medallion is accompanied by two oblong-shaped subjects of a smaller size incorporated in the foliaged scrolls framing the edge and representing scenes from the Old Testament or symbolic animals. The fifth medallion from the bottom shows the mission of the Apostles and the Ascension. On the right the symbolic eagle teaches its eaglet to stare at the sun and fly towards it. On the left is the caladrius (Fig. 3). This shows a
naked man lying on a couch with a rich green coverlet over him. His head rests on a cushion and his eyes are open. At the head of the bed is another man, and parts of a building, presumably a palace, appear on the right and left. The bed-rails are represented as bands ornamented with scrolls. On the further bed-rail stands a large white bird with a long neck and head bent down towards the man's face, which it touches with its beak. In the upper part a similar white bird flies into the air with what appears to be a long yellow ribbon in its beak.

**The caladrius in literature**

T. H. White⁴ in footnotes states that Shakespeare did not know Latin and so could not read the bestiaries as no full English translation existed in his time, and consequently does not mention the caladrius.

Emma Phipson⁵ quotes from Chester's curious poem 'Love Martyr':

> 'The snow-like colour'd bird, Caladrius,
> Hath this inestimable natural propertie
> If any man in sickness dangerous
> Hopes of his health to have recoverie
> This bird will always looke with a cheerful glance
> If otherwise, sade in countenance'

There is very little else besides the bestiaries and classical natural history works that mention the caladrius. Druce⁶ extracts from *Le Bestiare d'Amour* the account of a man, in a state of despair because the lady will show him no favours, who complains that she, like the caladrius, has turned away her face from him, and that he is very sick. To which the lady in reply objects to his advances on the grounds of inexperience: 'If I were as wise as the caladrius, I should not have to beware of bringing forth that which is so sweet to conceive. Ha! True God! guard me from conceiving anything which would be dangerous to bring forth.'

**The caladrius in heraldry**

Druce⁶ was unable to find the caladrius used in heraldry although Denys⁷ states it is mentioned in Mowbray's French treatise in the section on birds borne on arms after the early 15th century.

Mr Tobie Louw,⁸ who was commissioned to design a coat of arms for the Medical University of Southern Africa, had his attention drawn to *The Heraldic Imagination*⁹ by Mr N. F. Hartman of the Bureau of Heraldry and conceived the idea of using a very stylised caladrius on the crest. To symbolise the universal uncertainty about which way the caladrius will look, he designed the bird with two heads facing in opposite directions (Fig. 4). The MEDUNSA coat of arms was proclaimed in *Government Gazette* No. 6273 of 19 January 1979 and feature: 'Arms - Azure, two caladrius wings displayed adorsed, issuant necks and heads crossed saltirewise. Argent.'

The South African Medical and Dental Council's coat of arms were registered with the Bureau of Heraldry on 10 August 1979¹⁰ and the relevant description is: 'Supporters: Two caladrius birds, argent, beaked and armed Gules, charged on the crop with a fleam Azure.' The Bureau of Heraldry recommended that in view of the status of the Council, supporters should be added to the emblem and caladrius birds were decided upon because of their medical connection.

The Italian dictionary (of heraldry, *Dizionario Atlantico* by Piero Guidelli Camajani (1940) quotes three coats of arms which include the caladrius: (i) Calandra of Sicily — 'Azure a caladrius proper'; (ii) Calandrini of Sarzana — 'Azure a saltire Or, in chief a caladrius proper'; and (iii) Calandrini of Sciacca — 'Azure on a bend or three caladrius sable' (James A. Tomlin, The Heraldry Society, London — personal communication). The only other use of the caladrius in heraldry that I have been able to trace is in the armorial bearings designed by Lancaster Herald for the Isle of Wight Health Authority and approved by the Kings of Arms in 1984 (E. N. Taylor, Hon. Secretary, The Heraldry Society London — personal
communication). The pertinent description is: 'Crest — two 
caladrius birds holding a sun.' The explanation accompanying 
the arms states: 'This bird was considered in mythology to be 
able to draw sickness out of a patient and fly up to the sun. 
The heat of the sun consumed the sickness and restored the 
patient to health. The rays from the sun suggest life and health 
emanating from a central point.'

The caladrius suggests the search of medieval people and 
indeed of all people for health, for foreknowledge and for 
miraculous cure and is a very fitting emblem for the medical 
profession.

I have used Druce2 and Huizinga3 as the main references and 
have quoted freely from them. My sincere thanks to Professor 
François Retief, former Rector of MEDUNSA, for stimulating 
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