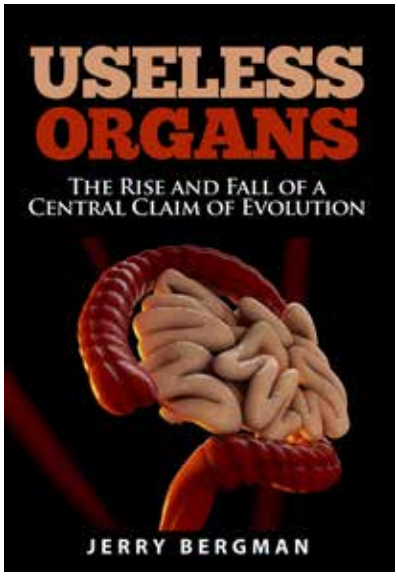
The evolutionary icon of useless organs has crumbled

Useless Organs: The rise and fall of a central claim of evolution

Jerry Bergman

BP Books, Tulsa, OK, 2019



John Woodmorappe

The argument about the human body being full of vestigial organs is over a century old. It is a dysteleological one. It allegedly points to organisms having an evolutionary history, as shown by the 'fact' that these certain organs were once functional, but no longer are. It otherwise accuses the Creator of making organisms with non-functional organs.

The vestigial organ argument is not passé. It is still very much part of evolutionary orthodoxy. Bergman (pp. 18–19) cites the study of Skoog, who evaluated 93 representative secondary biology textbooks from 1900 to 1977. A total of 9,641 words were devoted to the vestigial organ argument!

The author, Jerry Bergman, is a scientist with a background in medical research. He has nine academic degrees, including five masters and two Ph.Ds. He has over 1,300 publications in scientific journals. The present work discusses many so-called vestigial organs, and I focus on some of the better-known ones.

The appendix

The appendix (figure 1) has been the showcase of an evolutionary vestigial organ since the days of Darwin. It has since been repeated *ad nauseum* in textbooks. In recent years, atheistic biologist Jerry Coyne has used vestigial organs to 'beat up' creationists. He goes on and on about all the 'bad design' in the human body, including the appendix (p. 13).

Not so fast. Coyne's outburst of evolutionary triumphalism is seriously misplaced. The appendix is hardly useless. It is now known to have an immune function (p. 55), and, during early development, it serves as a lymphoid organ (p. 59). The innervation of the appendix had been little studied because of its presumed lack of function (p. 56). Now the appendix is known to be a reservoir of beneficial intestinal bacteria.

Evolutionary imagination and the human embryo

Human embryos temporarily have what superficially looks like a tail. However, there is no evidence that this is anything more than the way the spine develops relative to the rest of the trunk.

Evidence from embryology is always subject to interpretation. For instance, no one suggests that the cleft palate or Siamese twins are manifestations of throwbacks to an evolutionarily ancestral condition!

The 'human tail' does not even make sense phylogenetically. Bergman points out that our supposedly nearest relatives—chimps, bonobos, gorillas, orangutans, and other apes—lack tails.

Now consider those immortal gill slits. Though they are brought up from time to time, their existence is totally imaginary. Bergman pointedly writes:

> "The gill and gill slit claims are not only totally false, but were recognized as erroneous as early as 1868. This fact is now acknowledged by many authorities, such as a 2001 text by Hickman *et al.*, which admitted that, 'the gill arches serve no respiratory function in either embryos or adults …'. O'Rahilly and Muller plainly state that 'the pharyngeal clefts of vertebrate embryos … are neither gills nor slits.' Blechschmidt is even more forceful, concluding that 'the so-called basic law of biogenetics is wrong. No buts or ifs can mitigate this fact.' He adds that the gill stage myth is 'not even a tiny bit correct or correct in a different form … . It is totally wrong.' This view is now universally shared by mainstream embryologists" (p. 96).

Now consider downy hair (lagu-no). The unborn human is covered by this fine hair, and evolutionists have seized upon this as an evolutionary throwback to the alleged hairy ancestors of humans. Now, if hair covering had only a thermoregulatory function, its presence on the unborn child in the uterus would make no sense, as the temperature in the womb is warm and uniform. But hair has multiple functions. In the case of laguno, it indirectly helps protect the skin of the embryo from the hostile watery womb environment.

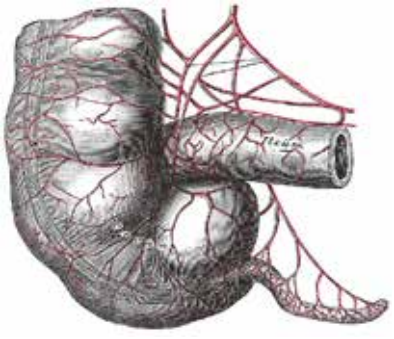


Figure 1. The appendix, no longer a useless organ

The thyroid—believe it or not—was once believed to be a vestigial organ

Bergman recounts the work of creationist surgeon and medical researcher Emil Theodor Kocher (1841–1917). Kocher, a pioneer active at the time of Darwin, rejected the ruling paradigm which taught that the body is full of useless evolutionary leftovers. Inspired by his creationist beliefs (he was a member of the Moravian Church), Kocher tested them. He transplanted thyroid tissue into patients that had undergone thyroidectomy. In time, he was shown to be correct about the function of the thyroid gland, and was awarded the Nobel Prize in 1909—the first Swiss citizen to receive one.

Even on its own terms, evolution cannot explain the origins of vestigial organs

It turns out that vestigial organs, even if they existed, are just as much a problem for evolutionary theory as they putatively are for creationism. The essential notion of an organ losing its function and becoming vestigial is tacitly Lamarckian. It assumes that an organ that is no longer used is somehow receptive to shrinkage and eventual disappearance. Bergman shows that this is problematic. If an organism has lost its function, there is no obvious selective advantage to have it reduced or removed.

Surgical removal of 'vestigial' organs does in fact harm the host organism

It has long been supposed that the removal of 'vestigial' organs does no harm to the organism. Even if this was so, it would not prove that the organ was functionless. It would only prove that it did not have an *essential* function. This would be consistent with *designed* redundancy, which engineers often build into machines.

As it turns out, close examination shows that removal of 'vestigial' organs does in fact harm the organism, even if the harm is not immediately apparent. Jerry Bergman points out that removal of the appendix is now known to be associated with maladies such as Hodgkin's disease, leukemia, colon and ovarian cancer, and Crohn's disease (pp. 70–71).

In like manner, removal of the tonsils increases the risk of Crohn's disease (p. 70). It also increases the likelihood of Hodgkin's disease by a factor of three (p. 83). Now consider the once-widespread removal of the 'useless' tonsils. A detailed study showed that those with tonsillectomies had three times the risk of asthma and twice the risk of chronic bronchitis, emphysema, upper respiratory tract diseases, and conjunctivitis (p. 86).

Let us also consider the thymus gland. The thymus gland starts to disappear at puberty, so was long thought useless. But if removed early in life, the immune system fails to develop properly (p. 249).

Modern civilization, and not 'bad design', causes problems with 'vestigial' organs

The relative smallness of jaws that cause problems with wisdom teeth, instead of being caused by recent evolution (which Bergman finds independently unconvincing) may instead be caused by diet. The soft, processed foods eaten nowadays do not facilitate growth of the jaw to its natural size (p. 186). This if also borne out by the fact that problems with wisdom teeth are rare in primitive societies (p. 191).

Now consider appendicitis. Instead of pointing to a useless and often harmful organ, it may result from living in an overly hygienic society, leading to overreaction of the immune system (p. 57). It is also far less frequent in cultures with a high-fibre diet. Some researchers believe premodern man seldom had problems with appendicitis (p. 62).

Far from advancing science, evolutionary theory set back medical science

Evolutionary theory is often touted as the very cornerstone of biological science. Bergman shows how it was often the exact opposite. Evolutionary thinking led to widespread medical policies that were, at best, unnecessary, and which, at worst, diverted attention away from legitimate medical concerns.

The appendix used to be removed as a matter of course when the abdomen was opened for some other surgery. (My grandmother, who had surgery for liver cancer, had this experience.) As noted earlier, the appendix is now known to have several functions.

Tonsillectomies used to be routinely done on children. Author Bergman had his tonsils removed as a child. Now we know better.

It is argued that science has advanced. Yes, it has, but was it because of evolutionary theory or was it *in spite of it*? One must ask a more fundamental question: could all the needless appendectomies and tonsillectomies have been avoided had we not subscribed to the preconceptions of non-functionality imposed by evolutionary theory?