

## JOHN WESLEY AND EVOLUTION

TO THE EDITOR OF SCIENCE: In a recent book on "Evolution and Animal Life" the authors, Jordan and Kellogg, attribute the following to John Wesley:

The ape is this rough draft of man. Mankind have their gradations as well as other productions of our globe. There is a prodigious number of continued links between the most perfect man and the ape (p. 452).

As a matter of fact, these statements, selected from different connections, are not attributable to Wesley in any proper sense. That they were thus ascribed to him by the authors probably grows out of the circumstance that in a work by this author, entitled "A Survey of the Wisdom of God as Revealed in the Creation, or A Compendium of Natural Philosophy," is contained extended quotations from Bonnet's "Contemplation de la Nature," and that among these may be found the passages in question, erroneously ascribed to Mr. Wesley. That the latter author gave the views concerned some measure of approval may be inferred in that he introduces the quotations in the following cordial terms:

This reflection upon the scale of beings, is pursued at large by one of the finest writers of the age, Mr. Bonnet, of Geneva, in that beautiful work, "The Contemplation of Nature." When I first read this, I designed to only make some extracts from it, to be inserted under their proper heads. But under further consideration, I judged it would be more agreeable, as well as more profitable to the reader, to give an abridgment of the whole, that the admirable chain of reasoning may be preserved, etc.<sup>1</sup>

However, not only in this indirect way may the interest of this versatile and scholarly theologian be inferred. The body of the work abounds in illustrations of intelligent sympathy with scientific activity and progress. And the authors of "Animal Life and Evolution" might have cited passages, almost as pertinent as those above, directly from Mr. Wesley. For example, on p. 148, Vol. I., may be read the following:

<sup>1</sup> Cf. *supra*, 3d American edition, Vol. II., p. 185; and for the passages in question, *ibid.*, pp. 208, 211.

Animals of the monkey class are furnished with hands instead of paws; their ears, eyes, eyelids, lips and breasts are like those of mankind; their internal conformation also bears some distant likeness; and the whole offers a picture that may mortify the pride of such as make their persons the principal objects of their admiration. These approaches are gradual, however, and some bear the marks of our form more strongly than others. In the ape-kind, we see the whole external machine strongly impressed with the human likeness; these walk upright, want a tail, have fleshy posteriors, have calves to their legs, and feet nearly like ours. In the baboon-kind, we perceive a more distant approach; . . . the monkey-kind are removed a step further, etc.

CHAS. W. HARGITT

## TWO FLEA REMEDIES TO BE TESTED

ASIDE from great annoyance caused by fleas, their agency in the carriage of the bubonic plague has been so well established that it is important to test every proposed remedy or preventive. Since the publication of my circular No. 13 on this subject, I have received information concerning two remedies vouched for by careful persons, but have not had a good opportunity to test either. I hope that readers of SCIENCE having the opportunity will try these remedies and will let me know the results.

Mr. E. M. Ehrhorn, the well-known entomologist who is deputy commissioner of horticulture in California, gives me the following: Fill a soup-plate with soapsuds; in the center place a glass of water with a scum of kerosene on top; place the soup-plate on the floor in an infested room, and set fire to the kerosene at night. Fleas in the room will be attracted and will jump into the soapsuds.

Another remedy is sent me by the well-known writer on ants, Miss Adele M. Fielde, with the request that I make it widely known. Miss Fielde states that during long residence in southern China, where fleas swarm even in clean houses, she made her own house immune through many years, by dissolving alum in the whitewash or kalsomine that covered the interior walls, putting sheets of thick paper that had been dipped in a solution of alum under the floor matting and scattering pul-

verized alum in all crevices where insects might lodge or breed. Powdered alum, she states, may be sprinkled upon carpets already laid and then brushed or swept into their meshes with no injury to the carpets and with the certainty of banishment to many insect pests including both moths and fleas.

Sheets that have been soaked in alum water and then dried may profitably enclose those that are spread nearest to the sleeper. . . . From ten to twenty cents' worth of alum judiciously used in each room of the house will effect much good in the prevention of dangerous insects.

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### SPECIAL ARTICLES

#### THE NEHALEM WAX

EARLY explorers of the Oregon coast found bits of a waxlike substance on the Nehalem beach near the mouth of the Nehalem River. In time considerable deposits of the substance were found buried in the beach sands. As early as 1846 several tons of the wax were shipped to the Hawaiian Islands and since that time many tons have found their way into the markets of the northwest.

There has been much speculation concerning the origin and nature of this wax and opinions have been divided as to whether it is beeswax or a mineral product, ozokerite.

An Indian legend tells of the wreck of a ship at the mouth of the Nehalem before the coming of the white man. The crew landed and cached the cargo as it drifted in. In confirmation of the legend the hull of a wrecked vessel was found there. It is further cited that the Spanish ship *San Jose* sailed from La Paz, Lower California, June 16, 1769, loaded with supplies for the Catholic missions to the northward, and was never afterwards heard from. Her supplies would probably include wax for candles and tapers in the missions.

The wax is found, mainly, in large rectangular blocks, bleached on the surface through exposure but of a yellowish cast within. The honey-like aroma of beeswax is plainly noticeable on a freshly cut sample.

An examination of an authentic portion of this wax was made in the Pacific University laboratory, the data on a home-made sample of beeswax being also determined for comparison. The following table gives the results obtained, the data for numbers 3 and 4 being taken from Allen, Thorpe and Dana.

	M.P.	Sp. Gr. at 15°	Per cent. KOH Required to	
			Neut. Free Acid	Sapon- ify Esters
1. Nehalem wax	64°	.960	1.00	7.80
2. Oregon beeswax	66°	.964	1.30	7.60
3. Beeswax (misc.)	63°-65°	.963-.969	2.00	7.50
4. Ozokerite	56°-63°	.85-.90	.00	.00

The properties of the Nehalem wax are thus seen to approach those of beeswax very closely and are not in accord with those of ozokerite.

Dr. H. N. Stokes, of the Bureau of Standards, and Professor O. F. Stafford, of the University of Oregon, have also pronounced the material beeswax.

C. E. BRADLEY

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#### CONCERNING THE NAME "HAVASUPAI"

A SMALL tribe of Amerinds living in a secluded canyon in Arizona have been variously called, Havasupai, Supai, Cohonino, Cosnino, etc., the full list being given in the Bureau of Ethnology's handbook. Gibbs wrote it Habasopi; Hodge, Agua Supai; Bourke, Ah Supai; Gilbert, Akbasupai; Gatschet, Akusuepai and Avesupai, while the first white visitor, Garces, in 1776, made it Jabesua, the "J," of course, being pronounced in the Spanish way.

During a recent visit to this tribe I inquired particularly as to the composition and pronunciation of the name. According to my understanding it is derived from "*aha*" water, "*basuga*" blue, and "*apa*" people, and is therefore *Ahabasugapa*, People of the Blue Water. This refers to the color of the stream along which they live. It is evident that, rapidly spoken, the name would take on a sound like "*habasupa*." The Spaniards would