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CONTENTS

THE SCIENTIFIC INTERESTS OF ROBERT W. GIBBES

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Few states contributed more to the development of the various branches of science in the nineteenth century than South Carolina. Beginning in the colonial period with the incomparable Dr. Alexander Garden,[1] respected correspondent of Linnaeus and Fellow of the Royal Society, a steady stream of gifted investigators brought recognition to the state. The taxonomical work of the eccentric Dr. John L. E. W. Shecut, the brilliant zoological studies of Dr. John Holbrook, and the kaleidoscopic investigations of Professor Lewis Reeves Gibbes illustrate the diversity of interests that characterized this distinguished body of South Carolinians.[2]

No man in the state was more sincerely devoted to scientific matters than Robert Wilson Gibbes. Dr. Gibbes's interest in science began while a student at South Carolina College.[3] A native of Columbia, he did not

* This study was made possible by a grant from the American Philosophical Society to Mr. Jellison, who is an associate professor of history at Miami University, Oxford, Ohio. Mr. Swartz is a high school teacher in Ashland, Illinois.

[1] Brook Hindle, *The Pursuit of Science in Revolutionary America, 1735-1789*, Chapel Hill, 1956, pp. 26, 38. Raymond Phineas Stearns, "Colonial Fellows of the Royal Society of London," *William and Mary Quarterly*, third series, III (April 1946), 258-260. Pierre G. Jenkins, "Alexander Garden, M.D., F.R.S., Colonial Physician and Naturalist," *Annals of Medical History*, X (1928), 149-158.

[2] South Carolina scientists were brought together by the Literary and Philosophical Society, organized in Charleston in 1813. One of the founders was Dr. John L. E. W. Shecut of Charleston whose work in medicine, botany, electricity, and other fields indicate his versatility. He is best known, however, for his attempt to simplify the Linnaean system. Arney R. Childs, "John Linnaeus Edward Whitridge Shecut," *Dictionary of American Biography*. Dr. John Holbrook, born in Beaufort, South Carolina, was educated in Massachusetts and Europe. In 1824 he helped to establish the Medical College of South Carolina, in which he lectured on anatomy for thirty years. He gained international recognition for his writings on herpetology and ichthyology. Hubert Lyman Clark, "John Edwards Holbrook," *DAB*. Robert Wilson, *Contributions of South Carolina Physicians to Science and Literature*, Columbia, 1944, p. 21. Lewis R. Gibbes, a cousin of Robert W. Gibbes, was an astronomer, mathematician, and naturalist. H. A. Kelly & W. L. Burrage, *American Medical Biographies*, Baltimore, 1920, p. 434.

[3] It is difficult to explain why historians have ignored the scientific efforts of Dr. Gibbes. A large part of his correspondence to leading scientists is available, and his contributions to scientific journals can easily be found. The present study is

permit his isolation from Charleston—the focal point for scientific activity in the state—to deter his investigations or dampen his enthusiasm. Stealing precious moments from a growing medical practice in the 1830's, he followed closely developments in geology, mineralogy, and conchology. His chief interest, however, was focused on paleontology of the tertiary epoch, and his publications in that field eventually gained for him national recognition in scientific circles. Although involved in several controversies, his correspondence and friendship with leading scientists indicate the high esteem in which his work was held. Certainly Dr. Gibbes was a scientist of note. It is, therefore, surprising that no effort has been made to survey and evaluate his contributions to the intellectual life of the nation.

I

The discovery in the early 1830's of twenty-eight huge fossilized vertebrae produced a flurry of excitement among the nation's scientists. The immense relics of the past had been embedded in a marl bank on the Ouachita River in Louisiana and washed to the surface by heavy rains.[4] Interest in the bones was increased when early attempts to identify the creature proved unsuccessful. One of the vertebrae, weighing forty-four pounds, was sent to the American Philosophical Society. The president of that organization, P. S. DuPonceau, assigned Dr. Richard Harlan the difficult task of identifying the animal. Harlan made his examination and concluded that the bones belonged to a huge lizard, a new genus of the class *Enaliosauri*.[5] He proposed to name the genus *Basilosaurus*.[6]

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based primarily on his letters to Samuel George Morton in the Morton Papers at the Library Company of Philadelphia (hereinafter cited as LCP). *See also* Arney R. Childs, "Dr. Robert Wilson Gibbes (1809-1866)," unpublished MA thesis, University of South Carolina, 1925. This work is suggestive but much too brief. The author ignored the correspondence of Gibbes. M. LaBorde, *History of the South Carolina College,* Columbia, 1859, is good for Gibbes's early career. Joseph I. Waring, *A Brief History of South Carolina Medical Association,* Charleston, 1948. Wilson, *op. cit.,* contains a brief survey of Dr. Gibbes's many activities.

[4] Robert W. Gibbes, "On the fossil genus Basilosaurus, Harlan (Zeuglodon, Owen) with a notice of Specimens from the Eocene Green Sand of South Carolina," *Journal of the Academy of Natural Sciences,* second series, I (1847-1850), 2-15. Michael Tuomey, "Notice of the Discovery of a Cranium of the Zeuglodon, (Basilosaurus)," *ibid.,* pp. 16-18. *See also* William Sampson, "Notice of a cetaceous Animal," *American Journal of Arts and Sciences,* XXIII (1833), 310.

[5] Richard Harlan, "Notice of fossil bones found in the Tertiary formation of the State of Louisiana," *Transactions of The American Philosophical Society,* IV (1834), 397. The class *Enaliosauri* was identified and named by William D. Conybeare, English geologist and divine.

[6] "The king of lizards."

Additional bones and teeth, apparently of the same creature, were discovered in Alabama during the next few years which led many to question seriously the reptilian character assigned to the original bones by Harlan. The question was not resolved until 1839. In that year Dr. Harlan took specimens of the *Basilosaurus* to England where they were examined by Professor Richard Owen. The Englishman, a leading anatomist of the period, determined that the bones and teeth did not belong to a reptile, but to a mammal which he identified as a great cetacean. Because of the yoke-shaped appearance of the teeth in transverse section, he proposed that the generic name *Zeuglodon* replace the inaccurate *Basilosaurus.*[7] Further excavations proved fruitful and an entire skeleton of the carnivorous whale that extended to a length of sixty-five feet was procured in Clarke County, Alabama, in 1843. These remains were dispatched to the Geological Survey of New York where they were assembled in Albany, studied, and reported on by Ebenezer Emmons in 1845.[8] Professor Emmons expressed his conviction that the skeleton belonged to the same animal as that described by Owen.

Excavations in South Carolina gave Dr. Gibbes an opportunity to participate in these paleontological speculations. Marling operations in 1845 on the plantation of R. W. Mazyck, located near the junction of the Santee Canal and the Cooper River, exposed a partial lower jaw and teeth of a fossil animal. Mazyck sent the fossil to the Columbia physician, knowing of his interest in such matters.[9] Gibbes was delighted, and started a careful examination to identify the fossil. A trip to Albany and Philadelphia permitted him to discuss the characteristics of the fossil with his friend Samuel George Morton and to compare it with features of the reconstructed *Zeuglodon* skeleton on display and described by Emmons. He found obvious similarities between his fossil and the *Zeuglodon,* but it was the differences in the specimens that

[7] Richard Owen, *Paleontology or A Systematic Summary of Extinct Animals and Their Geological Relations,* Edinburgh, 1860, pp. 343-346. T. A. Conrad, "On the geognostic position of the Zeuglodon, or Basilosaurus of Harlan," *American Journal of Arts and Sciences,* XXXVIII (1840), 381-382.

[8] S. B. Buckley, "On the Zeuglodon Remains of Alabama," *American Journal of Arts and Sciences,* second series, II (1846), 125-129. "Notice of the Discovery of a nearly complete Skeleton of the Zygodon of Owen (Basilosaurus of Harlan) in Alabama," *ibid.,* XLIV (1943), 409-412. Emmons taught at Williams College and Albany Medical College and later served as state geologist for New York (1838-1842) and North Carolina (1851).

[9] Robert W. Gibbes, "Description of the teeth of a new fossil animal found in the Green Sand of South Carolina," *Proceedings of the Academy of Natural Sciences,* II (1845), 1-3.

intrigued him most. Encouraged by Morton, he submitted a report of his fossil to the Academy of Natural Sciences in June 1845.[10] In the article, Gibbes reported that the teeth in his possession presented the same yoked-shaped appearance as the teeth of the *Zeuglodon* of Owen. Furthermore, both Lyell and Conrad dated the green sand deposits in South Carolina in which the specimen was found to the Eocene period, the same period of the area that yielded the *Zeuglodon.* Here the similarity ended. Gibbes's specimen had hollow teeth that were serrated, a characteristic of the saurians. However, they had two roots. He observed that teeth implanted in a double socket were judged mammalian while the socketed teeth of reptiles had but a single fang. From his investigation of the skeleton in Albany, he found that the jaw of that animal was much shorter and proportionately thicker than his specimen. He decided to name his specimen *Dorudon* because of its spear-shaped jaw and concluded that it belonged to the same class as the *Zeuglodon.* The similarity that the *Dorudon* had with both the whales and reptiles led Gibbes to suggest that his specimen might be a connecting link between those two great classes.[11] That it was a new genus, Gibbes felt was a certainty.

The article on the new fossil was well received and catapulted the South Carolinian into national prominence. Understandably pleased by the favorable attention focused on the *Dorudon,* Gibbes was unprepared for what followed. Professor Owen, whose pronouncements commanded universal respect, opined that the *Dorudon* was not a separate genus but a small *Zeuglodon.* Gibbes was both disappointed and angry. Writing to his friend Morton, he complained that Owen's examination of the evidence was conducted in haste and inconclusive. He lamented that he could not set his opinion against Owen and admitted that "I must give up to the authority [of the Englishman] for the time being." Gibbes was satisfied that his *Dorudon* and the *Zeuglodon* he had examined in New York did not belong to the same genus. To prove his position, however, required more evidence. He confided to Morton that he had hired men to "dig for my *Dorudon*" and instructed Mazyck to let "me know if he comes across a large skeleton, if so, I will contrive to go to the locality to see it carefully taken up."[12] But fate conspired against him. News from the Mazyck plantation informed him that his cousin

[10] *Ibid.* Gibbes to Samuel George Morton, July 15, October 13, 1845; Edmund Ravenel to Morton, April 28, 1845; M. Tuomey to Morton, May 15, 1845, Morton Papers, LCP.

[11] Gibbes, "Description of the teeth of a new fossil . . .," p. 3.

[12] Gibbes to Morton, March 20, October 30, 1846, Morton Papers, LCP.

had suffered a mental breakdown and marling operations had been suspended. Full of disappointment, Gibbes pleaded with Morton for encouragement.[13]

While awaiting more favorable news from the Mazyck plantation, Gibbes travelled to Alabama in the spring of 1846 to try and learn more about the *Zeuglodon.* Here in the company of his friend Josiah C. Nott,[14] he met an interesting "schoolmaster," C. S. Hale of Mobile. Gibbes found Hale an enthusiastic amateur collector of fossils who cared little for recognition. With "old" Hale's assistance, the South Carolinian procured a box of Eocene fossils from Clarke County that included a vertebra of the *Zeuglodon* which weighed 50 pounds. The Alabama schoolmaster also promised to send Morton fossilized specimens of sea-urchins.[15]

Most of the scientific world accepted the conclusion of Professor Owen that the *Dorudon* was not a separate genus but a young *Zeuglodon.* Certainly the evidence appeared conclusive. The *American Journal of Arts and Sciences* carried a survey of the fossil discoveries in Alabama and South Carolina in which it was observed that the *Zeuglodon* was found as "far east as the Santee Canal . . . from whence the teeth and portions of [a] jaw were taken being imbedded in the green sand marl."[16] Although discouraged by his inability to procure additional bones of the *Dorudon,* Dr. Gibbes privately refused to accept the Englishman's view. "I cannot divest my mind," he wrote to his Philadelphia confidant, "that the *Dorudon*" is different. Disheartened, he confessed that he felt "isolated . . . with not a man in the place to encourage me." In an obvious attempt to solace his friend, Morton suggested that he prepare an article on the *Zeuglodon* that summarized all the known facts. Gibbes agreed that such a report would have value and accepted the undertaking.[17]

[13] Gibbes to Morton, June 2, 1846, Morton Papers, LCP.

[14] Dr. Nott was born in Columbia and educated at the South Carolina College. He later attended the University of Pennsylvania and was awarded the M.D. in 1827. After his return to Columbia to begin practice, he and Gibbes spent much time together. In 1835 Nott settled in Mobile, Alabama, where he built a lucrative private practice and gained considerable recognition. George H. Ramsey, "Josiah Clark Nott," DAB.

[15] Gibbes to Morton, March 20, June 2, 1846; Nott to Morton, April 4, 1846, Morton Papers, LCP. C. S. Hale, "Geology of South Alabama," *American Journal of Arts and Sciences,* second series, VI (1848), 354-363.

[16] "Zeuglodon Cetoides," *American Journal of Arts and Sciences,* second series, II (1846), 131.

[17] Gibbes to Morton, September 21, 1846, Morton Papers, LCP.

By January 1847, the South Carolinian was with good reason in a happier frame of mind. He cheerfully reported to Morton that he had received another huge vertebra of the *Zeuglodon* sent by "Mr. Cooper a lawyer at Claiborne." Furthermore, digging had been resumed on the Mazyck plantation. Although Mazyck had not completely recovered from his recent illness, he had assured his cousin that "the rest of the [*Dorudon*] bones" would be found "very soon." And finally a vacant professorship of geology and mineralogy at the University of Alabama had been offered to him. Gibbes was very pleased at the honor. However, he decided to decline and recommend Michael Tuomey, state geologist of South Carolina, for the post.[18]

Gibbes's optimism was well founded. As his cousin had promised, additional bones of the *Dorudon* were soon found. He reported to Morton that he now possessed a fragment of a lower jaw and twelve vertebrae—six dorsal and six caudal—which had characteristics that were quite different "from those of the *Zeuglodon* specimen [I] procured in Alabama last spring." Armed with the new favorable evidence he was disposed to fall back to his original position and prove that the motto on his signet was a good one—"*Tenax propositi.*" With spirits soaring, Gibbes thought it not unlikely that he could successfully prove the *Dorudon* was a separate genus but could also identify other new genera as well.[19]

The discovery of a *Zeuglodon* cranium near Charleston in the spring of 1847, identified by F. S. Holmes and Professor Lewis Gibbes and described for the Academy of Natural Sciences by Tuomey, caused Dr. Gibbes to reconsider his claims.[20] That the *Zeuglodon* was found in the same general area that yielded the *Dorudon* added weight to Owen's conclusion that the two belonged to the same genus. Gibbes pondered what the discovery meant. Was the similarity of teeth sufficient evidence upon which to determine genus? Perhaps he had been wrong. If so, the *Dorudon* was only another species. Yet, he knew that the *Megalosaurus* and *Geosaurus* had similar teeth but were classed as different genera. He informed his friend in Philadelphia that "I am working in a small way for South Carolina and American Geology, I will go on and throw in my mite in the general fund and of course be subject to the correction of the higher powers in Science." He reverted

[18] Gibbes to Morton, January 7, 1847, Morton Papers, LCP.

[19] Gibbes to Morton, March 4, 1847, Morton Papers, LCP.

[20] Tuomey, "Notice of the Discovery of a Cranium of the Zeuglodon," pp. 16-18. Gibbes to Morton, March 1847, Morton Papers, LCP.

to his earlier decision to accept the findings of the Englishman publicly but privately held tenaciously to the belief that the *Dorudon* was a separate genus.[21]

Dr. Gibbes's article on the *Zeuglodon,* published in the *Journal of the Academy of Natural Sciences,* was a brilliant and clever piece of writing.[22] In it, he gracefully acknowledged that the *Dorudon* was not a distinct genus while he disagreed with Owen on other points. The South Carolinian observed that no less than five names had been assigned at one time or another to the remarkable remains of the immense cetacea: *Basilosaurus, Phocodon, Squalodon, Zeuglodon,* and *Dorudon.* He suggested that the scientific world accept Dr. Harlan's designation for the genus to avoid confusion. That the generic name *Basilosaurus* was objectionable in "a critically zoological point of view" was obvious but no "more than many other names that [were] admitted, among which [was] that of Saurus, which Cuvier . . . applied to a genus of Fishes." Professor Owen's designation of *Zeuglodon* was unsatisfactory because it referred to the character of teeth which was equally present in some of the dugongs and seals. Furthermore, propriety demanded the restoration of the appelative of the original identifier. In a final disagreement with the Englishman, Gibbes proposed to recognize three species of the genus as follows:

Basilosaurus: HARLAN

1. *Basilosaurus cetoides:* Owen
2. *Basilosaurus serratus:* Gibbes
3. *Basilosaurus squalodon:* Grateloup

Certainly Dr. Gibbes's investigations and writings about the *Dorudon* and *Zeuglodon* brought him prominence in scientific circles, but he found the reputation of Professor Owen too much for him. To Owen the question was closed; he contemptuously ignored the South Carolinian. In his textbook on *Paleontology* published in 1860, Harlan's *Basilosaurus* was deemed an error in identification and the *Dorudon* not mentioned.[23]

[21] Gibbes to Morton, March 10, April 1, 1847, Morton Papers, LCP. Professor Louis Agassiz agreed with Gibbes that the *Dorudon* was generically distinct from the *Basilosaurus* or *Zeuglodon cetoides. See Proceedings of the Academy of Natural Science of Philadelphia,* IV (1848), 4-5.

[22] Gibbes, "On the Fossil genus Basilosaurus, Harlan . . .," pp. 2-15. Gibbes to Morton, April 17, April 28, 1847, Morton Papers, LCP. Gibbes took drawing lessons so that he could prepare accurate plates for the article.

[23] Owen, *Paleontology* . . ., p. 344. Owen had little patience with those who disagreed with him. "The real merits of the man who would make scientific capital by changing the position of . . . and by imputing error or ignorance to

However, the Englishman was wrong; the question had not been resolved. Uncertainty about the classification of the *Archaeoceti* still prevails. It is interesting to note that in recent classifications, *Basilosauridae* and *Dorudontidae* constitute two of the three families of the *Archaeoceti*, and *Dorudon* is accepted as a separate genus.[24]

II

The ease with which specimens of prehistoric monsters were obtained in Alabama served as a magnet to draw a number of curiosity seekers to the state whose devotion to science was questionable. Certainly the most fascinating member of this group was Albert Koch, a German, who came to the United States in 1835.[25] Unscrupulous and possessed of a flair for showmanship but little scientific training, the German was quick to note the market possibilities in fossils. In 1840 he sold a group of bones, exhumed in Missouri, to the American Philosophical Society. That he mistakenly identified the animal as a mammoth when it was a *Mylodon harlani* or giant ground sloth did not disturb his conscience.[26] Later in the same year he obtained a mastodon which he took to London and placed on exhibition in Egyptian Hall. Professor Richard Owen, one of the first to examine the animal, immediately observed that Koch had not put the bones together properly. Yet, the bones of the "grotesquely distorted monster" when accurately reconstructed constituted the finest specimen of a *Mastodon americanus* in existence. The British Museum eventually purchased the "Missouri

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the author [Owen] from whom he may differ in this respect, are easily weighed and soon understood." *Ibid.*, p. 27. *See also* Gibbes to Morton, July 1, August 23, 1847, Morton Papers, LCP.

[24] Remington Kellogg, *A Review of the Archaeoceti*, Washington, 1936, pp. 10-15, 178-184, 287-292.

[25] M. F. Ashley Montagu and C. Bernard Peterson, "The Earliest Account of the Association of Human Artifacts with Fossil Mammals in North America," *Proceedings of The American Philosophical Society*, LXXXVIII (1944), 407-419. This account is generally sympathetic to Koch. *See also* George P. Merrill, *The First One Hundred Years of American Geology*, New Haven, 1924, pp. 212-214. Richard Harlan, "Description of the bones of a new fossil animal of the order Edentata," *American Journal of Arts and Sciences*, XLIV (1843), 69-80.

[26] "Note of the remains of the mastodon and some other extinct animals, collected together in St. Louis, Missouri," *Proceedings of The American Philosophical Society*, first series, XIII (1840), 279-282. Montagu and Peterson, "The Earliest Account . . .," p. 408.

Leviathan" from the enterprising German for £1,000 in cash and an annuity of £300.[27]

Undaunted by remarks that criticised his lack of scientific training, Koch appeared in Alabama in January 1845 to search for additional marketable wares. Near Clarksville, he quickly found a thirty-foot section of a whale's spinal column. When further efforts in that area proved futile, he moved his operations to Washington County where additional bones were found. With remains collected from three widely scattered areas Koch constructed an animal that measured over 114 feet in length! He claimed that the animal was a new genus, named it *Hydrarchus sillimanii,* and exhibited it as a sea-serpent in New York City. Koch eventually disposed of the creature in 1847 to the King of Prussia in return for an annual pension.[28]

Dr. Gibbes took more than passive interest in the *Hydrarchus.* After reading a pamphlet prepared by Koch in which the "sea-serpent" was described, he wrote a frantic letter to Morton indicating a fear that the *Hydrarchus* was identical with the *Dorudon,* "mine being a young animal." [29] That Koch had not accurately identified his specimen was irrelevant. Gibbes was sure, at this time, that the *Dorudon* was a genus distinct from the *Basilosaurus* (*Zeuglodon*) and did not want the honor of its discovery and identification to slip away to Koch. Obviously, he had to discredit the findings of the German. The task did not appear difficult. The composite nature of Koch's animal (which the German steadfastly denied) made him the butt of repeated criticism from the scientific world. S. G. Houston observed that the German's specimen was fabricated from a "bone here and a bone there," and Dr. George Lister concluded that Koch "could have made his skeleton three hundred feet long, as easily as one hundred and fourteen feet." But the respected Charles Lyell disagreed. He opined that the "sea-serpent" was actually fifteen miles long, the farthest distance from which bones were gathered for the creature! Dr. Jeffries Wyman questioned the German's understanding of geology. He noted that the anatomical characters of the teeth of the *Hydrarchus* were not those of a reptile, but of a warm-blooded mammal. The Harvard professor *wryly* added that "as an [example] of the accuracy and skill of the joiner of the *Hydrarchus,* . . . the extremities of the so called paddles of this skeleton, were formed

[27] "Zeuglodon Cetoides," *The American Journal of Arts and Sciences,* second series, II (1846), 131-132n.

[28] Montagu and Peterson, "The Earliest Account . . .," p. 415.

[29] Gibbes to Morton, October 13, 1845, Morton Papers, LCP.

of . . . shell [s] . . .!" Although the assault designed to destroy the credibility of the German was massive, he proved a durable adversary. He too had friends. In Europe, the illustrious Carl Gustav Carus and others published an account in which they accepted Koch's findings that the fossil was reptilian. Professor Wyman sent Gibbes a notice of the article and observed that Koch "has humbugged them completely with his statement that all the bones were found in one locality and very nearly in their natural order." Professor Louis Agassiz also added his voice to the chorus against Koch and Carus.[30]

In South Carolina the *Hydrarchus* "controversy" took a curious turn. Gibbes, who led the assault on Koch in the state, suddenly found himself under attack. The Reverend John Bachman, a respected Charleston divine and amateur scientist, not only defended Koch but questioned the accuracy of Dr. Gibbes's work in the field. Gibbes feared that state geologist Michael Tuomey was partially responsible for Bachman's acrimonious remarks. Tuomey's increasing sensitivity to the recognition won by Gibbes in the field of geology had caused the two friends to quarrel. Dr. Gibbes was understandably hurt by the local defense of a man "who was convicted of fraud [from] the evidence on record in our scientific journals." He suspected that "Dr. Bachman's blood is up because Koch is a German." In a letter to Morton, Gibbes lamented that minor errors in his writings about the *Dorudon* caused Bachman to "bring all sorts of charges against me." He pessimistically concluded, "I have got a complete hornets' nest about my ears." [31]

The bitter personal exchange between Gibbes and Bachman was of short duration. The *Hydrarchus*—improperly gathered, assembled, and identified—was sufficient evidence to convict its owner of fraud. But the German was too busy on another bone-hunting expedition for new customers to be troubled by the charge. In South Carolina the controversy left ugly scars. Although Tuomey apologized to Dr. Gibbes, the relationship between the two was never again the same. The crusty

[30] Gibbes to Morton, September 7, 16, October 12, 1847, Morton Papers, LCP. "Postscript," *The American Journal of Arts and Sciences*, second series, I (1846), 313-315. "Zeuglodon Cetoides," *ibid.*, II (1846), 130-133. George Lister to Jeffries Wyman, *Proceedings of Boston Society of Natural History*, II (1846), 94-96. Muller to Retzius, March 24, 1847, *American Journal of Arts and Sciences*, second series, IV (1847), 421-422.

[31] Gibbes to Morton, March 10, November 30, December 11, 1847, Morton Papers, LCP. *See* Gibbes to Morton, September 21, 1846, for the beginning of the Gibbes-Tuomey split.

Bachman made no offer to repair the damage, but Gibbes was not surprised. After all, the Charleston man of God was not a gentleman.[32]

III

Paleontology continued to occupy a major portion of Dr. Gibbes's spare time. His extensive collection of shark's teeth prompted Agassiz to suggest that he classify them and publish a report in the *Journal of the Academy of Natural Sciences*.[33] Although preoccupied with the *Dorudon* controversy, Gibbes managed to complete the *Squalidae* study which was published in August 1848. In the article he identified six new species from the teeth in his possession.[34] He hoped that "others may be induced to extend what I have commenced" and noted that with the exception of Morton and Harlan, "no attention has been given to the fossil *Squalidae* by American Naturalists." The reviews of the study were highly laudatory and the South Carolinian was characterized as "one of the most zealous and industrious votaries of . . . science."[35] The energetic South Carolinian also contributed articles on the *Mososaurus* (a large marine lizard), human skulls from mounds in his native state, *Myliobates* (rays), horse fossils, the mastodon, and a survey of fossils common to various geological formations.[36]

[32] Gibbes to Morton, June 20, August 16, 1848; February 22, June 8, 1849; March 31, 1850, Morton Papers, LCP. One South Carolina review made the following comment about the position of Gibbes in the argument: "This memoir [Gibbes's article on the *Basilosaurus*] has excited much discussion in the daily papers of our city and no doubt verifications and corrections have become necessary. The most recent visit of Professor Agassiz has given a new impulse to the study of the fossils, so abundantly deposited in the tertiary beds of marl and green sand of our low country. We wait further investigation before entering into the merits of Dr. Gibbes's memoir, and do not doubt that he himself would prefer some delay, in order that he may extend his enquiries further. . . ." *Charleston Medical Journal and Review*, new series, III (1848), 95.

[33] Gibbes to Morton, April 1, April 28, July 1, August 23, September 7, 1847, Morton Papers, LCP.

[34] Robert W. Gibbes, "Monograph of the Fossil Squalidae of the United States," *Journal of the Academy of Natural Sciences*, second series, I (1847-1850), 139-149, 191-207. For earlier work by Gibbes on the subject, *see* "On the Fossil Squalidae of the U.S.," *Proceedings of the Academy of Natural Sciences*, III (1846), 41-43, and "Description of New Species of Squalides From Tertiary Beds of South Carolina," *ibid.*, III (1847), 266-268.

[35] The statement was made in a review of Gibbes's article in the *Charleston Medical Journal and Review*, new series, III (1848), 700.

[36] Robert W. Gibbes, "A Memoir on Mososaurus and the Three Allied New Genera, Holcodus, Conosaurus, and Amphorasters," *Smithsonian Institution Publica-*

Perhaps his major contribution to science during these years was as an eloquent spokesman in defense of geology against the religious objections to the field that were legion. Geology, he believed, was the sublime science—the science of sciences—and he ridiculed those who "keep one eye on fact and the other on Genesis." He was understandably upset that geology, "a subject of special interest in every prominent seat of learning in our own country and in every European University," was not taught in his own state's colleges. The study of geology was eventually made a part of university instruction in the state largely because of Dr. Gibbes's persistence.

The parsons and their followers who assigned the earth an age of six thousand years were also the subjects of his scorn. Certainly geological researchers clearly indicated that the age of the earth should be calculated in "millions rather than thousands of years" and was inhabited by "successive tribes of living things, long before the time when man was summoned into being." The literalists could not impede the general advance of knowledge, and Gibbes admonished them that "unless theology can at least keep pace with philosophy, it shall hardly be able to cope with infinity!" Fear that new discoveries in geology—or in any science—would militate against the disclosures of scripture was unfounded. He urged those untutored in science to have patience. Geology "may scale new heights and explore new depths" but "shall bring back . . . from her daring and successful excursions" a new understanding of a science and a fresh interpretation to strengthen the validity of the Bible.[37] But the parsons remained skeptical.

Gibbes saved his severest barbs for legislators, in both Columbia and Washington, who showed indifference or only casual interest toward

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tions, II, No. 14 (1851). Robert W. Gibbes, "On Mound Skulls from South Carolina," *Proceedings of the Academy of Natural Sciences,* VI (1853), 433-434. Robert W. Gibbes, "New Species of Myliobates From the Eocene of South Carolina, with Other Genera not heretofore observed in the U.S.," *Journal of the Academy of Natural Sciences,* second series, I (1847-1850), 299-301. Robert W. Gibbes, "Remarks on the Fossil Equus," *Proceedings of the American Association For the Advancement of Science,* I (1848), 66-68. Robert W. Gibbes, "Remarks on Mastodon angustidens," *ibid.,* 69-71. Gibbes also wrote *Documentary History of the American Revolution,* New York, 1854-1857, and *Magnetism of the Human Body,* Columbia, 1843. The latter was delivered as a lecture to the Library Society of Charleston.

[37] Robert W. Gibbes, *The Present Earth the Remains of a Former World,* Columbia, 1849, 3-31. This book was based upon a lecture that Dr. Gibbes delivered before the South Carolina Institute in September 1849. Gibbes to Morton, September 12, 1849, Morton Papers, LCP.

scientific matters. When Tuomey published a report of his first three years as state geologist, Gibbes was asked to review the work.[38] Although Tuomey praised the legislature for its decision to have a systematic geological survey made "by competent persons" and commented that only North Carolina had done so earlier, Gibbes did not believe the state had done enough. He reminded the readers that the post of state geologist, created in 1842, was first filled by Edmund Ruffin of Virginia, who brought eminent qualifications to the office but whose ideas were repeatedly ignored by the state. He complained about the decision of the legislative committee on publication to omit plates from the state geologist's report. That plates were an essential part of a geological account of South Carolina, a state rich in the cretaceous and tertiary series and abounding in fossils, was obvious. When the legislative committee "decreed that the plates of fossils—so all important to the geologist—were not essential to the volume," they were indicating an ignorance of science. "It is evident," he observed, "that the special committee [on publication] were not very deep in tertiary geology." Parsimony in such matters was in bad taste. He hoped that in a "future session of our Assembly . . . a more scientific and a less economical spirit [would] prevail." In a more optimistic vein, Gibbes thought that Tuomey's survey would bring respectability to the subject of geology in the state and weaken the religious opposition. Certainly the portion of the report which dealt with geology and the Bible indicated that science was not repugnant to the "proper interpretation" of the holy word.[39]

The South Carolinian had equally harsh words for lack of interest in science on the national level. In reviewing five articles from the National Institute for the *Southern Quarterly Review,* he observed that politics and the rights and liberties of "our great and growing confederacy are the themes of public writers from one end of our Union to the other," but the "scientific and literary character of our government" was seldom the subject of any serious study. It was unfortunate that the United States, "which boasts of the virtues, intelligence, and mental abilities

[38] Michael Tuomey, *Report on the Geology of South Carolina,* Columbia, 1848.

[39] R. W. Gibbes, "A Review," *Southern Quarterly Review,* XVI (October 1849), 161-178. Gibbes to Morton, February 22, 1849, Morton Papers, LCP. It is interesting to note that other reviewers also commented on the omission of plates and figures from the report. "It seems from a postscript to the preface, that while the report was passing through the press, he [Tuomey] was informed, that the committee on publication had decided . . . the plates containing the figures *were not essential* . . . ." Thomas Bouve, "Review of M. Tuomey's Final Report on the Geological Survey of South Carolina," *American Journal of Arts and Sciences,* second series, VIII (1849), 61-74.

of her citizens," viewed the progress of science as "belonging exclusively to individual exertion and to be fostered by individual means." Gibbes believed that American scientific effort deserved more sympathetic treatment from the government and warned that other nations were sufficiently interested in and concerned about the labors of scientific men to promote and encourage them through extensive government aid. Although the United States sponsored an expedition from time to time to explore the geography or topography of an area, it consistently failed to provide adequate support. In an obvious reference to the expedition led by Charles Wilkes, he noted the numerous difficulties its members had to endure because of inadequate financial support. Furthermore, Congress had made no effort to publish and disseminate the scientific results or care for the extensive collection of specimens gathered by the expedition. The government had shirked its responsibility when it failed to appropriate money "for the publication of the record of the naturalists and men of science appointed to note everything interesting and new on the voyage." The only information available to the public about the "great enterprise" was the narrative of the commander, "published at his individual expense for his own benefit." Gibbes hoped that the newly formed National Institute would fill the hiatus created by a miserly and unscientifically oriented Congress.[40]

IV

Meanwhile the mid-nineteenth century witnessed the eruption of a long smoldering controversy about the origins of man. Few Americans who watched the plot thicken in the scientific drama found it possible to remain neutral. With religious and political overtones that were obvious, the issue was basic. Was man the product of a single pair of ancestors according to Biblical tradition or were there many separate creations? Did the American Indian and the Negro slave spring from the same race that in the distant past produced the Caucasian? What evidence existed to explain the differences of color and anatomical structure found in man? Were there superior races? Did unions between blacks and whites produce a prolific offspring or a feeble hybrid? The steady stream of questions raised were unending, complicated, and rarely satisfactorily answered. Both sides marshaled "scientific facts" to buttress arguments and manufactured hypotheses to confuse the opposition.[41]

[40] R. W. Gibbes, "Reviews," *Southern Quarterly Review*, VII (October 1845), 379-406.

[41] For a thorough and fascinating account of the controversy, *see* William Stanton, *The Leopard's Spots*, Chicago, 1960.

Dr. Gibbes, no doubt influenced by the personalities involved, followed the controversy with keen interest. Leading the attack against the advocates of the unity of man were his two closest scientific friends, Nott and Morton.

Morton, with characteristic scholarly reservation, had refused to meet the unity question head-on in his *Crania Americana* published in 1839, but as the evidence mounted, his caution melted away. Measurement of 623 crania clearly indicated that the Caucasian had the largest brain (92 cubic inches) and the Negro had the smallest (83 cubic inches).[42] Color of skin could not be explained by climate because Negroes were found in both hot and cold zones. Morton next turned to the question of hybridity. Naturalists of the eighteenth century assumed hybridity a test of specific character and concluded that "if mankind embraced several species, the intermixture of these would go no further than to produce a sterile hybrid variety." The races were, however, capable of producing a "progeny more or less fertile" when mixed. Did this fact warrant the conclusion that the races belonged to one and the same species? Morton thought not. He methodically evaluated the known instances of hybridity in animals. Although hybrids were "contrary to nature," he admitted that a "latent power of hybridity existed in many animals." A prolific cross-breed was often the result. Morton concluded that a natural repugnance between individuals of different kinds kept the animal world from becoming a scene of confusion. But he also observed that in the state of domestication the natural repugnance was substantially modified. Therefore, it was meaningless to say that man, "the most domestic of animals," possessed the power of fertile hybridity because the phenomenon was not "unfrequent among animals, whose specific, and even generic diversities, [were] unquestionable." Centuries of proximity notwithstanding, the existence of repugnance between the European and African stock was still evident. That the several races of man produced a fertile progeny when crossed did not prove the unity of the human species.[43]

Nott, who gloried in controversy, also contributed to the cause. In *Two Lectures on the Natural History of the Caucasian and Negro Races*

[42] Samuel G. Morton, "Observations on the Size of the Brain in various Races and Families of Man," *American Journal of Arts and Sciences,* second series, IX (1850), 246-249.

[43] Samuel G. Morton, "Hybridity in Animals, considered in reference to the question of the Unity of the Human Species," *American Journal of Arts and Sciences,* second series, III (1847), 39-50, 203-212.

he denied the validity of Biblical chronology and frankly proclaimed the diversity of human origin.[44] The "researches" of Nott and Morton led to an inescapable conclusion. The races of man were marked by permanent differences which resulted from separate creations. Clearly, some races were superior to others. Dr. Gibbes concurred wholeheartedly. That the Negro belonged to an inferior race, he never doubted.

The beginning of 1850 found Nott predicting a quick and victorious end to the controversy. In a letter to Morton, he noted that "the scientific world is gradually coming right, and the unthinking mass will soon follow." He thought Morton's catalogue on the size of the brain in man would "clinch" the matter.[45] Morton, however was more cautious. His chief concern was the clergy, which had shown remarkable restraint thus far. Perhaps, if not pushed too hard or fast, the parsons would also make concessions in this matter.[46] However, Nott and Morton were unprepared for the counter-attack mounted by South Carolina's scientifically oriented parson, John Bachman.

Nott's *Lectures* and Morton's articles on hybridity were distasteful to Bachman, whose views on the unity question were well known. When the Charleston Literary and Philosophical Society decided to take up the controversy, Bachman was assigned the task of reviewing Nott's *Lectures*.[47] The membership expected a good show, and the parson did not disappoint them. Gibbes reported to Morton that rumblings from the meeting were felt in Columbia and that Nott had aroused the wrath of the clergy of South Carolina. Gibbes knew that Bachman was a dangerous adversary when riled and remembered only too well the time when his own scientific writings were the butt of the parson's scorn. Although Holbrook and Geddings, members of the Society, planned to reply to Bachman, Gibbes warned the Philadelphian to beware.[48] Nott echoed Gibbes's alarm. He admitted that Bachman had given him a "skinning" and cautioned Morton that attempts would be made "to kill you off."[49]

But Bachman had already warned Morton what to expect. In a "friendly" communication, the Charlestonian expressed surprise at the number of "unreliable" sources and the amount of conjecture found in

[44] H. M. Michel to Morton, September 10, 1849, Morton Papers, LCP.

[45] Nott to Morton, January 16, 1850, Morton Papers, LCP.

[46] Stanton, *The Leopard's Spots*, p. 121.

[47] Bachman to Morton, October 15, 1849, Morton Papers, LCP.

[48] Gibbes to Morton, January 21, 1850, Morton Papers, LCP.

[49] Nott to Morton, March 1, 1850; Cain and Porcher to Morton, March 25, 1850, Morton Papers, LCP.

Morton's articles. Bachman was willing to concede that men on both sides of the question were in search of truth and challenged Morton to debate the issue. The arguments could be directed to the *Charleston Medical Journal.* He hoped that religion would not be brought into the debate because "when we are able to read intelligibly we will discover that both [nature and Scripture] harmonize." Bachman concluded his letter with the bizarre suggestion that the two men exchange books, an act he characterized as "lending sticks to break each others' heads." "I am ready," he said, "to give you all my sticks provided you will now and then loan me one of yours." [50]

Bachman's position on the great question was based upon a curious mixture of Scripture and scientific theorizing. To deny that God "made of one blood all nations of men for to dwell on the face of the earth" was to reject the inspiration of the Scriptures. The externally different races were *varieties* which resulted from the adaptability of man to environment. While Morton, Nott, and others stressed the distinct features of the races, Bachman pointed to the remarkable uniformity of man. He did not believe that Morton's writings on hybridity aided the polygenist argument. "Have you not put yourself in a tight place," he asked the Philadelphian, "when you produce rats, mice, peacocks, and guinea hens as examples [of interspecific crossing]—where domestication has had little or no change?" Yet Bachman did not advocate the equality of man which was the logical conclusion of his theorizing. Varieties of man were fixed, and some had advanced more than others. The Negro was in the latter category.[51]

Dr. Gibbes spared no effort to aid his friends in the argument. He brought Agassiz to Columbia to lecture in the spring of 1850, at which time the two men visited many nearby plantations to examine Negroes. Gibbes wrote to Morton that Agassiz "found enough [evidence] to satisfy him that they [Negroes] have differences from other races." [52] But Gibbes was not pleased with the tide of battle in South Carolina. Bachman's arguments were making "quite a stir," and the clergy in the state viewed them as "settling the unity question." Gibbes grudgingly conceded that Bachman marshaled many interesting facts to support

[50] Bachman to Morton, October 15, 1849, Morton Papers, LCP.

[51] Bachman to Morton, October 15, 1849, Morton Papers, LCP. "Review of the Doctrine of the Unity of the Human Race examined on the Principles of Science," *American Journal of Arts and Sciences,* second series, XI (1851), 302.

[52] Gibbes to Morton, March 31, 1850, Morton Papers, LCP.

his arguments. Yet the Charlestonian was "inconsistent" and his didactic manner unbearable.[53]

The effervescent Nott did not share Gibbes's pessimism. Always eager for a fight, he was delighted with the progress of the battle in South Carolina. He happily confided to Morton, with his usual candor: "I have succeeded in getting some of the rest of you into the fight . . . and I mean now to sit on the fence and look at you as the woman did to see the fight between her husband and the bear." Now that Agassiz had entered the controversy armed with new evidence from his visit with Gibbes, a quick victory was expected. Nott expected Agassiz to "blow out old Bachman's brains" and suggested that Morton ought to "take time enough to skin" the preacher. With a spirit of levity that belied the intensity of the struggle, the Alabamian was "perfectly delighted at the sport."[54] However, "old Bachman's" skinning proved more difficult than Nott anticipated.

Morton and Bachman agreed that the debate should be conducted in the pages of the *Charleston Medical Journal* in a "calm spirit." When one of Morton's salvos in the debate in the *Medical Journal* was submitted to the Charleston *Courier* by an interested reader, Bachman was understandably upset. In the article, Morton explained his interpretation of Genesis. The first chapter of the book provided, he wrote, a *generic* or general account of the creation of man without reference to number or locality. The second chapter gave an account of the creation of man "in and for a particular region . . . and not a collective centre for the whole human family." Morton believed that this interpretation would remove some of the difficulties found in scriptural history, "such as the sons of Adam obtaining wives who were their own sisters" or "Cain's acquiring instruments of husbandry." He concluded that the biblical scholar, "disposed to adopt the Unity doctrine," would find no difficulty "in the converse of it."[55]

Bachman addressed his reply to Morton to the Charleston *Courier*. With biting sarcasm he reminded readers that Morton had used the same book of Genesis (seven years earlier) to prove the descent of all mankind from the Ark. He was shocked that the Philadelphian would "fly the course in this scientific race" and "now shelter himself behind the panoply of scripture authority." Or did Morton now find the rules

[53] Gibbes to Morton, April 10, 1850; Cain and Porcher to Morton, April 6, 22, 1850, Morton Papers, LCP.

[54] Nott to Morton, May 4, 26, 1850, Morton Papers, LCP.

[55] Charleston *Courier*, May 25, 1850.

of the debate too confining to support his untenable position? Although Bachman had "neither time nor inclination to write on the subject for the newspapers," he promised the public a full answer to the question. Morton's contention that Cain found "in the land of Nod a wife of another species" or that mankind might have existed "chiliads of centuries" upon the earth was incredible. The disciples of Voltaire were ashamed of using the former argument, and the latter was "set at rest by the unanimous decision of Geologists." [56]

Nott, Morton, and company hastily reassessed the outlook for a quick victory. Dr. Gibbes, saddened by the acrimonious nature of the debate, held Bachman personally responsible. He apologized to Morton for Bachman's conduct and assured the Philadelphian that no "Carolina Gentleman" could sanction such impropriety.[57] Nott also experienced fleeting despair. He admitted that "old Bachman [was] a pretty hard customer" and lamented that "he attacks me very rudely." Nott hoped that the parson, who wrote like "a blackguard," would injure his own cause.[58]

Nott did not despair long; it was alien to his nature. In the spring of 1851 he again congratulated Morton on the annihilation of the "old Hyena" (Bachman) and hoped that "his death" would be a warning to all. Meanwhile, a parson in Alabama had attempted to create a similar disturbance, but Nott easily "put him down." With characteristic modesty, Nott admitted that he was the "lion" of Alabama! [59]

The controversy was eventually silenced by the war and the impact of Darwinian ideas. Although riddled with error, each side had contributed insights. In South Carolina the argument was never clear-cut. Both factions gained and lost adherents as they pushed their arguments in a tortuous path to meet the thrusts of the opposition. Although Dr. Gibbes followed the controversy closely and his allegiance was always clear, he never assumed a major role in the great drama.

V

In addition to his private practice and increasing professional duties during these years, Dr. Gibbes acquired ownership of the *Palmetto State Banner* when its owner defaulted on a mortgage. He astutely absorbed

[56] Charleston *Courier*, May 28, 1850.

[57] Gibbes to Morton, June 17, 1850, Morton Papers, LCP.

[58] Nott to Morton, July 25, August 26, 1850, Morton Papers, LCP.

[59] Bachman to Morton, March 15, 1851; Nott to Morton, April 6, 1851; Cain and Porcher to Morton, April 10, 1851, Morton Papers, LCP.

a competitor, *The South Carolinian,* and served as editor and publisher of the combined newspapers until 1858. That he managed to add the duties of full-time newspaper editor to his already crowded and complicated life is testimony of his boundless energy and catholicity of interests.[60] But the strain of his multi-faceted life was too much for him and began to tax his health. In a letter to his old friend Morton he confided that repeated attacks of asthma caused him much discomfort. However, his chief concerns were the heart pains that produced numbness in his left arm and a circulation that was slower than natural. He admitted experiencing periods of depression during which he felt "solitary and alone." Yet, he did not permit his physical disability to thwart his desire to contribute to the knowledge of man.[61]

Dr. Gibbes's health continued to deteriorate. Tormented by attacks of asthma of increasing frequency, complicated by pleurisy, he was forced to bed for four months in the fall of 1859. In January of the new year he determined to seek a more equitable climate. He left Columbia, "feeble, out of breath upon the slightest exertion, suffering at every change," and doubtful of more than temporary improvement.[62] At a time when his medical brethren were advocating the efficacy of the west and southwest for respiratory diseases, Gibbes decided upon Cuba. The island produced results that far exceeded his expectation. His lungs cleared quickly, and each day brought new strength to his body. As his health slowly returned, so did his enthusiasm for life. The island fascinated him. He returned home determined to recommend the wonderful island to others. The result was the publication in 1860 of *Cuba for Invalids* in which the physician, natural historian, geologist, and close observer of human nature were all present. Gibbes believed that the south side of the island offered most promise to patients, particularly during the winter months. He cautioned that recuperation in Cuba was expensive but pointed out that restoration of health more than justified the outlay. In addition to the evaluation of the therapeutic virtues of the climate the book is filled with Gibbes's observations and impressions of life on the island. Few things escaped the discerning eye of the South Carolinian. A "Black Virgin," milking cows, frequency of blindness, meterological observations, confessions of a Cuban robber, Negroes at a funeral, sulphur springs, a fat priest, and a snoring commissary, all caught the fancy of the physician. Dr. Gibbes found the women of the

[60] Charleston *Courier,* March 3, 1858.

[61] Gibbes to Morton, January 21, 1850, Morton Papers, LCP.

[62] Robert W. Gibbes, *Cuba For Invalids,* New York, 1860, pp. v-viii.

island striking in appearance. He admired their olive complexions, jet black and luxuriant hair, "lustrous eyes [with] exquisitely penciled eyebrows," and the well-formed busts. Yet, with characteristic South Carolinian chauvinism, he concluded that "we saw no really beautiful women among them." [63]

Dr. Gibbes watched the gathering of war clouds with growing dismay. Although the state of his health was still precarious at the beginning of the conflict, his prominence in the field of medicine dictated his appointment as war-time surgeon-general of South Carolina. He accepted the appointment without regard to personal considerations. In the destruction of Columbia he lost everything, including his prized scientific collections.[64] The widespread devastation of the South during the war saddened him and no doubt hastened his death. Affectionately labeled the "old patriot," he died of a fever at the age of fifty-seven a few months after Appomattox. He received much attention from a distinguished group of professional friends during his last illness, yet he died full of loneliness and despair.

Robert Wilson Gibbes lived a life filled with accomplishments, his early death notwithstanding. A successful physician and surgeon in Columbia for over thirty years, sometime newspaper editor and public official, he always found time to pursue the secrets of science. His professional and scientific contributions gained recognition that transcended the boundaries of his native South Carolina. Dr. Gibbes played a significant role in the intellectual life of the nation and deserves to be rescued from the shadowy pages of history.

[63] *Ibid.*, pp. 29-39.

[64] Howard Kelly, *A Cyclopedia of American Medical Biography, 1610 to 1910*, Philadelphia, 1912, I, 338.

AN ACCOUNT OF THE INVASION OF SOUTH CAROLINA BY THE FRENCH AND SPANIARDS IN AUGUST 1706

EDITED BY JOSEPH IOOR WARING, M.D.*

In August 1706 a combined French and Spanish force made an attempt to capture Charles Town but was repulsed by the colonists without any great difficulty. Accounts of this invasion are included in the documents in the British Public Record Office and are among those in the Sainsbury transcriptions.[1] Other accounts appear in a number of sources.[2]

Recently the South Carolina Historical Society has acquired a contemporary copy of an account of the attack. This report was transmitted to England in 1706. It does not differ materially from the accounts in the British Public Record Office, but does contain some additional information.

With this newly acquired document are a letter of transmittal from His Majesty's Council and a letter of explanation of the delay in sending it by Nicholas Trott.[3] These original papers are not included in the earlier transcriptions, nor are copies of them now in the BPRO. Because they appear to add certain information to other accounts, the portions not already available in print are presented here.

In the Society's document, the last two paragraphs read:

> In the same Vessel we took their Field Canons being of Copper, and their Standard being white Sarsenet having the French and Spanish

* Dr. Waring is the author of *A History of Medicine in South Carolina, 1670-1825,* which was reviewed in the last issue of the *Magazine.* The editor of this *Magazine* would like to note that this year marks the 400th anniversary of the founding of St. Augustine. Charleston and St. Augustine were great rivals in the eighteenth century as these items indicate. For a different connection between the two cities, *see* the review of *General Greene's Visit to St. Augustine in 1785.*

[1] *Records in the British Public Record Office Relating to South Carolina, 1701-1710,* Columbia, 1947, pp. 161-187.

[2] One version from the *Boston News-Letter,* October 7-14, 1706, is reprinted in this *Magazine,* XL (July 1939), 73-78. These accounts have been treated in detail in a paper (in manuscript) by Harry S. Mustard, M.D., of Boykin, South Carolina.

[3] Nicholas Trott was a London lawyer who was appointed attorney-general of Carolina by the Proprietors. Theodore D. Jervey, "Nicholas Trott," *DAB.*