chapters and reserved the right to modify the scope as he worked. He closed by assuring Henry that when the work was finished, Henry would want to publish it in the Smithsonian's Contributions to Knowledge, the Smithsonian's larger format and more prestigious refereed series of scholarly memoirs.

After further correspondence with Henry and Baird in May, Rau wrote his May 30 letter to Gibbs in reaction to a note from Baird. He expressed frustration with the more limited conception of the work held by Henry and Baird. He saw his work not as a mere paper but as forming most of a volume of Smithsonian Contribu-

tions to Knowledge. Before investing further time and labor, he sought assurances that the work, if recommended for publication by referees, would be published in the prestigious series. He wrote Gibbs that his intended illustrations required the larger and more costly format. Appealing to Gibbs to present his case to Henry, Rau wrote, "You will perceive that I need encouragement in the matter rather than the reverse." This major work by Rau was never published.

Rau to Henry, April 10, 1868, and April 28, 1868, RU 26, Smithsonian Archives; Henry to Rau, April 11, 1868, in the same location as this letter; Hinsley, pp. 44, 46.

## 93. TO ASA GRAY

Smithsonian Inst<sup>on</sup> July 8<sup>th</sup> 1868

My Dear Dr:

The first intimation that I had of your going abroad was from Whitney<sup>1</sup> who informed me that he had hired your house for a year. I immediately commenced a letter, but was interrupted before I had time to finish it.

We were very sorry that Mrs Gray could not come to us and most sincerely hope that her residence abroad will be beneficial. I think you have adopted the wisest course in this as you have in all previous epochs of your life.<sup>2</sup>

I am very anxious to have a long conversation with you and will endeavour to so arrange my affairs so as to meet you either in New York or Cambridge: From which of these two ports do you sail?

I am a little surprised that you ask me what you shall do with the Eulogy on Bache since I thought you had given it to Dr Gould. You will please however return it to me since it will save the labour of a copyist.³ Sabine has adopted it as the account of the life of Bache in his annual address ascribing the authorship to myself.⁴ He has also sent me a copy of the 1⁵t volume of the great scientific index⁵ which I think will be of great importance to American savants in giving a conspicuous place ↑reference↓ to their contributions: for example no less than six columns are devoted to Bache's,⁴ ↑contributions↓ and several papers are inumerated of which I had lost sight. This volume includes the first three letters of the alphabet. The origin of the work, in the preface is very liberally ascribed to a suggestion of my own in a letter addressed to the British Association.⁶

I have just presented to Congress the report of the National Academy for last year, 7 and have embraced ↑the↓ occasion in this to give some views in regard to the importance of abstract science as connected with our present civilization, 8 and have suggested that if the government is to be benefitted by the operations of the Academy it must make provision for the annual meeting of the body and the more frequent assembling of its Committees in Washington. 9 I have said very little in regard to the publication of the memoirs, since the 1st volume contains but five papers composed of ↑contained↓ in 342 pages, though the number was unlimited by law. 10

I very reluctantly accepted the office of President and I was principally induced to do so at the earnest solicitation of Mrs. Bache, who since her husband was the first President, and because his fortune after her death will be under the car[e]<sup>B</sup> of the Academy, is exceedingly anxious that it should be perpetuated.<sup>11</sup>

I introduced a resolution at the last meeting to abolish the itinerary character of the Academy and to have an annual session in Washington in the month of May. I mentioned the fact in my report that I had no part in the organization of the Academy but since Congress has seen fit to establish an institution of this kind I thought it my duty to give it all the aid and direction in my power. 12 Thus far all the assistance it has afforded government has been through the labor of a few persons principally connected with the government, residing in Washington and New-York and unless Congress makes provision for the meetings of members from a distance, it will receive no more benefit from the Academy than what it could have obtained from a commission casually appointed. I am somewhat delicately situated in regard to the Academy. I honestly desire to render it of use in way of advancing the science and reputation of our country, and am far from desiring that it should expire in my arms, but how to preserve its life and to render it useful is a different problem, and on this point I desire some confidential confabulation with you, whom I have always found a wise and just man. The affairs of the Institution are now in a very prosperous condition: the new Regents are all well disposed: even Wade takes an active interest in our affairs and fully appreciates the spirit of the establishment. 13

With kind regards to Mrs Gray, I remain very truly

your friend— Joseph Henry

Dr A. Gray Cambridge Mass Historic Letters, Archives, Gray Herbarium Library, Harvard University.

Letterpress copy: Private Letterpress, Henry Papers, Smithsonian Archives. Reply: July 19, 1868, RU 26, Smithsonian Archives.

- 1. Josiah Dwight Whitney, who had become Sturgis-Hooper Professor of Geology at Harvard in 1865 while on leave from the California Geological Survey. He became dean of the School of Mining and Practical Engineering at Harvard in 1868. DSB.
- 2. Gray had informed Henry about the proposed year-long European trip in a letter of July 4. He was concerned that his wife was too weak to spend another winter in Cambridge and confessed his own need for a break: "I can not longer stand what I have had to do." Gray to Henry, July 4, 1868, RU 26, Smithsonian Archives.
- 3. According to correspondence with B. A. Gould, Henry and Bache had agreed that whoever died first would be eulogized by the other. Apparently concerned that Henry would die first, Bache had made a similar agreement with Gould. After being informed by Henry of his agreement with Bache to write his eulogy, Gould wrote "of course it was you & only you who were the fitting person." Henry to Gould, November 20, 1867, Private Letterpress, Henry Papers, Smithsonian Archives, and Gould to Henry, December 14, 1867, RU 26, Smithsonian Archives.

Henry drafted a eulogy and provided the draft to Asa Gray, Gould, and Edward Sabine so they could draw from it. Henry read his eulogy to the National Academy on August 27, 1868, during the Northampton meeting. For some reason he did not present it to the Smithsonian regents, who had requested it shortly after Bache's death, until three years later. It was printed in the Biographical Memoirs of the National Academy of Sciences, 1877, 1:183-212d, and in the Smithsonian Report for 1870, pp. 91-116. Drafts, largely in Henry's hand, survive in the Henry Papers, Smithsonian Archives (boxes 24 and 25). Henry to Harriet Henry, August 27, 1868, Family Correspondence, Henry Papers, Smithsonian Archives; Henry to Asa Gray, November 25, 1867, Private Letterpress, Henry Papers, Smithsonian Archives.

As incoming president of the American Association for the Advancement of Science, Gould delivered his eulogy at the Chicago meeting earlier in August (AAAS Proceedings, 1868, 17:1–55). The eulogy in the Proceedings of the American Academy of Arts and Sciences (1865–1868, 7:312–319) was clearly based on Henry's and was presumably prepared by Gray.

4. Edward Sabine (*Henry Papers*, 2:290n–291n; 3:296n) was president of the Royal Soci-

ety. Extracts of Henry's eulogy were printed in *Proceedings of the Royal Society of London*, 1867–1868, 16:lxiv–lxix.

5. The Royal Society's *Catalogue of Scientific Papers* (1800–1863), the first volume of which was published in 1867.

6. The preface notes, "The present undertaking may be said to have originated in a communication from Dr. Joseph Henry, Secretary of the Smithsonian Institution, to the Meeting of the British Association at Glasgow in 1855, suggesting the formation of a Catalogue of Philosophical Memoirs: this suggestion was favourably reported on by a Committee of the Association in the following year." *Catalogue*, 1:iii.

Henry had proposed such an index as early as 1849. *Henry Papers*, 7:468, 469n; 10:26, 27n.

- 7. U.S. Senate, 40th Congress, 2d Session, Letter of the President of the National Academy of Sciences, Senate Miscellaneous Documents, No. 106 (1868).
- 8. Henry wrote that the establishment of the academy was "an epoch in the history of philosophical opinions in our country" (p. 2). After pointing out that the most advanced civilizations of ancient times depended on the labor of slaves, he continued:

It is the first recognition by our government of the importance of abstract science as an essential element of mental and material progress. Modern civilization, in addition to the adoption of the ethics of the pure and ennobling spirit of Christianity, differs essentially from the civilization of ancient times in the means derived from science, by which it is enabled to control and direct the energies of nature, and to render them subservient to the uses of man. [p. 2.]

He argued that the government should support not only "the direct promotion of the useful arts" but also "original research in the various branches of human knowledge" (p. 3). *Letter*, pp. 2–3.

9. Henry argued that both the number and quality of papers presented at academy meetings and the advice given to the government on request could be further improved through a modest amount of government support. He pointed out that most National Academy members were college professors or officers in the army or navy. As "men of limited means" who received nothing for their academy work on behalf of the government, they found it difficult

to afford trips to Washington. Henry suggested that Congress appropriate a small sum to underwrite the cost of the annual meetings and thereby ensure good attendance. "It would stimulate higher researches, elevate the character of the association, and be productive of more valuable assistance to the government" (p. 5). In reference to the latter, Henry suggested that the government should refer questions not only from the executive branch but also from the legislative and judicial branches. In particular, he argued that the bias of "expert" witnesses in court cases could be avoided by referring subjects to the academy for expert opinions. *Letter*, pp. 3–5.

10. The first volume of memoirs was published in 1866. True, *National Academy*, p. 378.

11. We have found no written evidence of Nancy Bache's "earnest solicitation." Shortly after the academy's January meeting, Henry wrote to inform her of his election as president and then continued, "I will tell you of the inducement which led me to accept this position, and other facts, in which I know you will be interested, when we meet." Henry to B. A. Gould, December 17, 1867, and Henry to Nancy Bache, January 28, 1868, Private Letterpress, Henry Papers, Smithsonian Archives.

Bache had directed in his will that following his wife's death, most of his estate would be devoted to "the prosecution of researches in Physical and Natural Science by assisting experimentalists and observers" under the direction of a three-member board (True, p. 33). He named Henry, Louis Agassiz, and Benjamin Peirce, representing the fields of physics, natural history, and mathematics. Following the establishment of the National Academy in March 1863, Bache amended his will to leave the bulk of his estate to the academy for the same purpose and under the direction of the same board. Henry had announced the terms of the bequest at the August 1867 academy meeting. A year after Nancy Bache's death in 1870, the amount in the fund was over \$40,000. The board typically approved one or more grants a year from the income of the fund, leaving the principal untouched; by 1889, it had awarded over \$38,000. True, *National Academy*, pp. 33–34, 361–363; Cochrane, *National Academy*, p. 98.

12. In the report, Henry wrote:

I feel myself more at liberty to urge the claims of the Academy, inasmuch as its members generally, including myself, took no step towards its establishment. Indeed, I must confess that I had no idea that the national legislature, amid the absorbing and responsible duties connected with an intestine war, which threatened the very existence of the Union, would pause in its deliberations to consider such a proposition. But Congress, having expressed its sense of the importance of an organization of this kind, the members designated accepted in good faith the appointment, and have since endeavored zealously to discharge the obligations thus devolved upon them. It is now the duty of Congress to do its part by furnishing the means to enable the Academy to fulfil its mission with credit to itself and the nation. [Letter, p. 5.]

13. Benjamin Franklin Wade (1800–1878) was a Radical Republican senator from Ohio. Although he was president pro tempore of the Senate and, with the vice presidency vacant, first in the line of presidential succession, his political career in Washington had effectively ended by late May due to his prominent role in the unsuccessful attempt to remove Johnson from office. *ANB*.

In lieu of the vice president, Wade served as an ex officio regent of the Smithsonian for the two years he was president pro tempore of the Senate. In the absence of the chief justice, who was chancellor of the board, he chaired the first meeting he attended, which was held on January 22, 1868. Of the five meetings he attended over the course of a year, most dealt with the issue of the national collections, specifically congressional appropriations for the national museum and for finishing the second story of the main section of the Smithsonian Building. Rhees, *Journals*, pp. 316, 317, 320, 321, 343.

## 94. TO EDWARD DRINKER COPE<sup>1</sup>

Smithsonian Institution, July 29. 1868.

My dear Sir;

Your letter asking that you be allowed the services of a "prepator" for one month @ \$120, to set up the skeleton of the Saurians, on which you are preparing a monograph for this Institution, has just been received