



CHAPTER TEN

Love in a Time of War

In 1896 Haeckel completed the last major scientific work of his career, his *Systematische Phylogenie*. That stolid, three-volume account of the kingdoms of protists, invertebrates, and vertebrates stands like a snow-capped volcano, only vaguely reminiscent of the fire-belching *Generelle Morphologie* that threatened the orthodox three decades earlier. Completion of this work on systematic phylogeny seems an accomplishment that might have initiated a period of rest and repose, a gentle decline during which accolades could be enjoyed at the end of a career—and through the turn of the century, Haeckel's honorary degrees and awards from learned societies accumulated at an accelerated rate.¹ Yet his tranquillity lasted only for a moment. The last two decades of his life exploded with awakened passion and ferocious combat. Three major events brought on the troubles: a new love, which grew in frustrating intensity; his book *Die Welträthsel* (*The world puzzles*, 1899), which ignited intellectual war on all fronts; and the Great War, a real war, which produced catastrophic cultural chaos and untold death and misery.

At Long Last Love

In 1927 a book appeared with the title *Franziska von Altenhausen: Ein Roman aus dem Leben eines berühmten Mannes in Briefen aus den Jahren 1898–1903* (*Franziska von Altenhausen, a novel of the life of a famous man in letters from the years 1898–1903*).² The editor, Johannes Werner,

1. See chapter 8 for a list of his honorary degrees and awards.

2. *Franziska von Altenhausen: Ein Roman aus dem Leben eines berühmten Mannes in Briefen aus den Jahren 1898–1903*, ed. Johannes Werner (Leipzig: Koehler & Amelang, 1927).

indicated that though the collection had the qualities of a romantic novel, the letters were nonetheless authentic. The names of the two protagonists, Paul Kämpfer and Franziska von Altenhausen, were pseudonyms used to protect the parties involved; place-names had also been changed. And, as it later became clear, the editing of the letters was quite imaginative: only a small portion of the original collection was included, crucial passages were cut, and completely fictitious lines were inserted. Shortly after the book appeared, Haeckel was easily identified as “the famous man”; and in the English edition published three years later, the veil partly fell from the title: *The Love Letters of Ernst Haeckel Written between 1898 and 1903*.³ For years the woman remained a mysterious figure. Her identity subsequently came to public light as a result of evidence preserved at Haeckel-Haus, the main repository of Haeckel’s manuscripts and letters. She was Frida von Uslar-Gleichen, a young woman of the minor nobility living in Hannover. The remains of the letters themselves—over five times the number in the original volume—had been deposited in the State Library in Berlin.⁴ Haeckel’s son, Walter, moved by what seems an anti-Oedipal impulse, arranged for the publication of the highly edited 1927 book.⁵ That first publication went through many translations and editions—in Germany alone sales reached 140,000 copies by 1943. Despite the extensive editing, the letters revealed a poignant relationship between two people quite in love

3. *The Love Letters of Ernst Haeckel Written between 1898 and 1903*, ed. Johannes Werner, trans. Ida Zeitlin (London: Methuen, 1930).

4. After the highly selected publication in 1927, the bulk of the letters (over nine hundred of them) remained in the family of the publisher. Just before the Russian takeover of eastern Germany, the publisher’s family fled to the west and finally deposited the letters in the Staatsbibliothek zu Berlin in 1968. This original correspondence (or that which has survived) and letters of Haeckel’s son and nephew, as well as relevant letters of the Uslar-Gleichen family, have recently been published. See *Das ungelöste Welträtsel: Frida von Uslar-Gleichen und Ernst Haeckel, Briefe und Tagebücher 1898–1900*, ed. Norbert Elsner, 3 vols. (Göttingen: Wallstein, 2000). Prior to this publication, I had used the collection (Nachlass Ernst Haeckel) in the Staatsbibliothek (Preussischer Kulturbesitz); and now, after checking originals against the published versions, I have relied on Elsner’s three-volume edition.

5. After the death of Frida von Uslar-Gleichen, her family returned Haeckel’s letters to him. Haeckel systematically arranged the correspondence; and just before he died, he left them with his nephew Heinrich, presumably because of their autobiographical interest. Heinrich Haeckel went through the correspondence, apparently with an eye to publication, but he died two years after his uncle. The letters were then sent to Haeckel’s son, Walter, who arranged for the highly redacted publication. The 1927 book surprised and upset both families, but Walter justified it because his father’s work, except for *Die Welträttsel* (which had been adopted by the “socialists and communists”), had fallen from public view. He hoped the publication would stimulate new interest in his father’s legacy. And as an artist and devoted son, he undoubtedly thought the artistic quality of the correspondence deserved public appreciation. See the letters describing these events in *Das ungelöste Welträtsel*, 3:1205–10.

but whose consciences apparently restrained their behavior.⁶ As a review in the *Times Literary Supplement* (11 September 1930) put it: "Nobody who reads these letters can doubt either the spiritual fire of their emotion or their suffering." Their suffering resulted from "the moral scrupulousness and the stern sense of duty which animated each of them."⁷

In the six years of their correspondence, over nine hundred letters passed between Haeckel and Frida, about one every two and a half days. Their bond grew more intimate than the published letters suggested. They certainly had moral scruples about their affair, but their relationship moved, nonetheless, beyond the platonic phase represented in the initial publication. In their letters the lovers would endlessly recount to one another their meetings in out-of-the-way hotels, their embraces, their strolls through gardens and parks, and their fugitive plans. Haeckel began to think of Frida as a reincarnation of his first wife—significantly Frida was born in 1864, the year of Anna's death. Beyond the lasting relation with his first wife, no other attachment affected Haeckel in so profound a way. At a time when attacks on him mounted because of *Die Welträthsel* and when his own wife Agnes and his daughter Emma had both withdrawn into the deep depressions and invalid valleys of the nineteenth-century neurasthenic, Frida provided the emotional escape that probably stayed his hand from taking his own life, which he had seriously contemplated on several occasions prior to their meeting. She also served as an intellectual and cultural confidante. She urged him to reduce the force of his assaults on religion and other orthodoxies; she advised him on the selection of illustrations for inclusion in his *Kunstformen der Natur* (Art forms of Nature, 1899–1904); she recited poetry to him, discussed music, and generally encouraged him in his work. She elevated his life when it threatened to plunge into the recesses of bitter despair and extinguished hope. Their story, though, does not have a happy ending.

Frida von Uslar-Gleichen was the eldest of five children of Bernhard von Uslar-Gleichen (1830–1873) and his wife, Anna (1833–1915). Branches of the family had been vassals to the elector of Hanover and, later, kings of Hanover and England. Her father had fought on the Austrian side in the Austro-Prussian War (1866) and died shortly after the peace was concluded, leaving the family with only a small income and a modest estate

6. As I initiated this study, I showed photocopies of the correspondence to a graduate student. He later remarked that he had never really been in love, but now, having read a portion of the correspondence, he thought he knew how love must feel.

7. [R. D. Charques], "Haeckel's Love Letters," *Times Literary Supplement*, no. 1493 (11 September 1930): 714.



Fig. 10.1. Frida von Uslar-Gleichen (about age twenty) and her brother Bernhard.
(Courtesy of Georg Freiherr von Uslar-Gleichen.)

at Gelliehausen near Göttingen. Frida was raised by her mother and helped with the care and education of the smaller children. She had tutors to age sixteen and thereafter saw to her own education. She was a cultivated woman who read generously; she frequently attended musical concerts, preferring Beethoven; and she painted tolerably well. She could write fluently and critically, as Haeckel would discover. She was also quite an attractive woman, slim, blond, and handsome. She was barely thirty-four and unmarried when she first corresponded with Haeckel; he was sixty-five.

Like many young women in her position during the nineteenth century, she felt smothered in layers of duties and expectations, with diversion relegated to occasional teas with maiden aunts. She spent her days among “pedestrian people [*alltäglichen Leuten*] and listening only to pedestrian people.”⁸ Ernst Haeckel arose in her eyes as a modern titan of science and something of a dangerous man; he opened the possibility of flight from her Biedermeier cocoon.

Their relationship began inauspiciously enough. In January 1898 she wrote him a fan letter about his *Natürliche Schöpfungsgeschichte* and asked if she could pursue a few questions with him. She obviously had considerable intelligence, and Haeckel sent her some books, including his *Reisebriefe von Ceylon*, to whet her appetite. They ritually exchanged photographs; and she, rather forwardly, remarked: “It is not a question that you please me, but from a purely artistic standpoint, you are a beautiful man [*ein schöner Mann*], and I’m quite happy about that.”⁹ He undoubtedly appreciated her beauty as well, and periodically she would send him updated photographs. He, in turn, would keep her supplied with books, both scientific and literary, the kind that he thought would further her self-education. When he learned that she had a great love for Goethe, a certain set of feelings fell into place for him.¹⁰

The letters through late winter and early spring of 1898 became increasingly more personal—with Frida detailing her hopes for a life with larger horizons and Haeckel emphasizing his miserable existence at a home in which the miasma of depression and recrimination hung heavy in the air. In July she tentatively suggested that he stop at Göttingen on his way to England, where he planned to attend an international conference and would receive an honorary doctorate from Cambridge University. The meeting did not take place. During the following weeks and months, each would continue to make suggestions for a rendezvous, which for one reason or another never occurred. Through the spring of 1899, Haeckel nailed himself to his desk to finish his book *Die Welträthsels*. As the page proofs appeared, he sent them to Frida, who would mark various passages in an effort to dilute the acid with which he etched his condemnations of orthodoxy; and later she would expend much ink consoling him for the scorn the book evoked from enemies and even friends. Finally, Haeckel felt he had to meet the

8. Frida to Haeckel (21 October 1901), in *Das ungelöste Welträtsel*, 2:706.

9. Frida to Haeckel (24 March 1898), in *ibid.*, 1:68.

10. Frida to Haeckel (15 July, 1898), in *ibid.*, 1:80.

woman who was becoming so dear, so necessary to his existence. In June 1899 the university planned an academic festival, which offered him the opportunity to invite her to a rather safe, public event.

Frida and Haeckel spent virtually the entire day of Saturday, 17 June, and the next day in deep conversation in his office at the Zoological Institute and in walks through the city. Immediately after she returned to her hotel on Sunday evening, she wrote to assure him that “what we have spoken about will remain only for you and me alone; and that through our conversation you have become still more beloved and dear.”¹¹ It was not only conversation they shared, but also a kiss. Later he recalled for her that kiss, when through his body arced “a shiver of desire of the sort I experienced with my dear first wife, Anna S., 40 years ago, and which I was never granted with my poor unhappy second wife—a born Vestal virgin.”¹²

After their encounter the salutations of their letters moved from the very formal “Most Honored Professor” and “Dear Honored Young Lady” to “My Dear Teacher” and “My Dear Frida.” Finally, her letters addressed him variously as “My Dear Ernst,” “My Sweetheart,” even “My Silver Bunny.” His became more simplified, from “My Loveliest, Dearest Friend” to just “L. F.” (*Liebe Freundin* or *Liebste Frida*). In the course of a letter, when his keenest desires seized his pen, he might refer to her as “bride of my soul.”

Their first meeting allayed their mutual anxieties about face-to-face contact and altered their relationship dramatically. They excitedly agreed to another visit on her return from her sister’s home, this time for three days (14 to 16 July 1899). Haeckel planned the event meticulously. He had her get off the train just outside of Jena at Papiermühle on Friday afternoon, 14 July. He met her there, and they lingered until nine o’clock in the garden restaurant, still a romantic setting today. The next day they traveled to Dornburg (a bit north of Jena) to visit an art gallery; on Sunday they stole time at the Zoological Institute; and on Monday they traveled to Weimar to walk through Goethe’s house, and then on to Eisenach and the Wartburg, where Luther translated the New Testament. During these intimate sojourns, they often embraced and kissed.¹³ Thereafter in his letters, Haeckel would refer to this three-day excursion as their “honeymoon” (*Brautfahrt*).¹⁴

Throughout the course of their relationship, they remained laced up in

11. Frida to Haeckel (18 June 1899), in *ibid.*, 1:142.

12. Haeckel to Frida (5 August 1899), in *ibid.*, 1:200.

13. Recounted by Frida in her diary (17 July 1899), in *ibid.*, 1:180.

14. For example, Haeckel to Frida (18 July 1899), in *ibid.*, 1:162.



Fig. 10.2. Agnes Haeckel in later years. (Courtesy of Ernst-Haeckel-Haus, Jena.)

a fraying Victorian morality. He wrote: "Is it not a tragedy that two highly gifted children of the earth, who are so completely made for each other, seem to be kept so far apart by reason of age and position, of standing and propriety?"¹⁵ She replied that it was not age, position, or propriety that kept them apart, but only duty to his wife.¹⁶ She wanted him to tell his wife, if not all the details of their relationship, at least that they were friends.¹⁷ When these requests were made, Haeckel always demurred, saying that

15. Haeckel to Frida (19 July 1899), in *ibid.*, 1:164.

16. Frida to Haeckel (21 July 1899), in *ibid.*, 1:165–66.

17. Frida to Haeckel (8 August 1899), in *ibid.*, 1:210.

his wife could not stand the shock, especially with her weak heart. On Frida's side, despite a stated desire for candor, she hid the extent of their relationship from her mother, who disapproved of her writing and visiting a married man—especially an infamous man like Ernst Haeckel.

As their relationship progressed, Haeckel constantly devised plans for their future. As a first possibility, they could simply maintain their relationship as that of friends—but he knew he could not keep the friendship nonphysical: “even against our judgment and will, it will be hand in hand, then arm in arm, and then mouth to mouth.” In the past, he confessed, many beautiful women had flung themselves at him; yet, he said, he never permitted himself any “sexual dissipation” (*geschlechtliche Ausschweifung*)—a tenuous claim, perhaps. With Frida, however, he would not be able to restrain himself. There was a second possibility. They could wait for his “unhappy wife to have her wish fulfilled to be freed from her difficult suffering of many years by an easy death”—but who knew how long that would take. Or, with the money he had amassed from his numerous publications, they could run away to an exotic island, while leaving sufficient funds for his wife and daughter. He concluded the first possibility would destroy his spirit and the latter two were unrealistic. Over the first year and a half of their relationship, their plight gradually scored in the souls of each wounds of deep melancholy, bleak pessimism, and unremitting desire.¹⁸

The World Puzzles

In September 1899 Haeckel's *Welträthsel* debuted in the bookshops. Almost immediately his publisher had to bring out a second edition; and then by mid-November, a third was readied. Haeckel wrote his friend Allmers the next April to report that “the success of *Die Welträthsel* surpasses all of my expectations; the fourth (unchanged) edition (8 to 10 thousandth) has now already appeared. Correspondence about it has occupied my whole winter.”¹⁹ During its first year, some 40,000 copies had been produced. The publication of the “people's edition” (1903), selling for one mark, helped boost the total sales in Germany to 400,000 before the First World War. And letters responding to the book flooded his offices. In 1903 alone, he had received over three thousand letters, both commendatory and condemnatory

18. Haeckel to Frida (5, 15, 18 August and 2 September 1899), in *ibid.*, 1:204, 234, 244, 268.

19. Haeckel to Allmers (12 April 1900), in *Haeckel und Allmers: Die Geschichte einer Freundschaft in Briefen der Freunde*, ed. Rudolph Koop (Bremen: Arthur Geist, 1941), 205.

(the majority).²⁰ It was an extraordinary succès de scandale. And scandal it was. A *New York Times* reviewer, evaluating the quickly published English translation (1900), epitomized what for many readers was the essence of the book:

One of the objects of Dr. Haeckel—it would not be unfair to say the chief object—is to prove that the immortality of the human soul and the existence of a Creator, designer, and ruler of the universe are simply impossible. He is not at all an agnostic. Far from it. He knows that there can be no immortality and no God.²¹

There was, of course, more to the book than that.

The book took its title from Du Bois-Reymond's conceit that seven world enigmas existed: (1) the nature of matter and force; (2) the initiation of motion; (3) the beginning of life; (4) the design of nature; (5) the appearance of sensibility; (6) the origin of consciousness and speech; and (7) the problem of free will.²² Du Bois-Reymond contended that the first, second, and fifth were transcendental problems for which there could be no solution, while the third, fourth, and sixth had yet to be solved. He was not sure into which category freedom of the human will fell. That Haeckel should have chosen as his title "The World Puzzles" was a bit like Darwin taking

20. Haeckel to Max Fürbringer (12 August 1903), in *Ernst Haeckel: Biographie in Briefen mit Erläuterungen*, ed. Georg Uschmann (Leipzig: Prisma, 1984), 282. While most of the objections concerned Haeckel's attacks on religion, some complained about the political considerations. John Lubbock (Lord Avery) and Haeckel began their friendship in the early 1870s and continued to be in communication through the first decade of the new century, with Haeckel supplying his English friend with copies of his various publications. Lubbock complained about Haeckel's not-so-subtle attacks on English political policy: "I have read your Riddle of the Universe [the English translation of *Die Welträthsel*] with interest, but am surprised at the unjust attack on England in 362 [*sic*, 354]. When did we take any colonies from Germany? . . . We are accustomed to unfounded attacks in some of the German newspapers, but surely a Philosopher should not attempt to sow dissension between two great and cognate peoples." See John Lubbock to Haeckel (12 December 1901), in the Correspondence of Ernst Haeckel, in the Haeckel Papers, Institut für Geschichte der Medizin, Naturwissenschaft und Technik, Ernst-Haeckel-Haus, Friedrich-Schiller-Universität, Jena. In his book Haeckel made the remark in passing that Christianity emphasized unrealistically love of neighbor at expense of self. He observed that when the injunction was translated into modern politics, it would suggest: "When the pious English take from you simple Germans one after another of your new and valuable colonies in Africa, let them have all the rest of your colonies also—or, best of all, give them Germany itself." See Ernst Haeckel, *The Riddle of the Universe*, trans. Joseph McCabe (New York: Harper & Brothers, 1900), 354.

21. "A Little Riddle of the Universe," *New York Times*, 27 July 1901.

22. Emil Du Bois-Reymond, "Die sieben Welträtsel," in his *Vorträge über Philosophie und Gesellschaft*, ed. Siegfried Wollgast (Hamburg: Felix Meiner, 1974), 159–86.

“Origin of Species” as his: both books denied the existence of their subject. Darwin argued that “species” served only as a term of convenience; in the course of nature, only similarity and variability existed. Haeckel believed that modern science, in its monistic version, had solved, at least in principle, all the world puzzles that Du Bois-Reymond had discriminated. They were no longer real conundrums. The framework of “world puzzles,” however, allowed Haeckel to sketch the advances made by modern science, the weight of which had extinguished, as he never tired of proclaiming, the old dispensation of a religiously infected science.

Haeckel’s view of the accomplishments of modern science, in broadest outline, is the one widely shared by scientists today. The details of the physical theory he described, then at the leading edge of science, have been greatly modified during the last hundred years. But the idea of continuity between the nonliving and living worlds; the application of natural law to account for all physical phenomena; the ultimate resources of observation, experiment, and logical analyses in the discovery of new knowledge; the validity of evolution by natural selection—all of these have been sanctioned by scientists in the modern day. The watchtowers that Haeckel erected around science to prevent the ingressions of supernatural entities continue to be manned by alert contemporary scientists, while in the plains below creationists and intelligent designers marshal the forces of an increasingly bellicose and politically armored religious fundamentalism.

In conformity to the physics of his day, Haeckel asserted that the universe consisted of congregations of atomic elements swimming in a sea of ether; the behavior of the elements and the sea itself ran in currents strictly governed by what he called the laws of substance—that is, the conservation of matter and the conservation of energy. The known elements—about seventy in Haeckel’s day—exhibited chemical affinities that formed larger molecules, the very stuff of macroscopic physical bodies. In Haeckel’s monistic reading, physical objects—even down to elemental atoms—had a quasi-mental side, which was displayed at the lowest level by bonding inclinations among constituents, their elective affinities. Among larger complexes, as found in living organisms, these fundamental forces were expressed in sensation, volition, and ultimately consciousness. What this monistic image precluded was an independent, nonphysical soul or distinct mental entity.²³

Had Haeckel’s depiction remained at the level of an abstract scientific

23. Ernst Haeckel, *Die Welträthsel, gemeinverständliche Studien über Monistische Philosophie* (Bonn: Emil Strauss, 1899), chap. 12.

materialism, of the sort just indicated, the book would not have caused the gorge to rise in the throats of any but the most theologically sensitive. But he relentlessly applied this monistic view to discuss the “nature of the soul” (an expression of forces of matter);²⁴ the “embryology of the soul” (from the amoeba-like movements of spermatozoa and egg to conscious functions of brain);²⁵ the “phylogeny of soul” (the continuity of psychic life from protists to invertebrates and then to vertebrates, as the evolutionary doctrine maintained);²⁶ and the “immortality of the soul” (persistence of elemental forces, while higher souls evanesced with their complex bodies).²⁷ Against this scientific image, Haeckel cracked the many myths of Western and Eastern theology like so many goose eggs.²⁸ And, of course, he applied this monistic worldview to the question of the deity. As he had already suggested thirty years earlier in his *Generelle Morphologie*, the only God that a thoroughgoing monism might tolerate is the God of Spinoza: *Deus sive natura*.²⁹

Haeckel did not wish to advance a Nietzschean ethics of a superior morality to replace the shards of the old morality.³⁰ The foundations of orthodoxy, whether derived from Christianity or from the more austere considerations of Kant’s practical reason, had to be rejected in light of modern science; but the code of conduct that they supported—Haeckel wished to leave those principles substantially intact. The new foundation for the Golden Rule and the biblical injunction to love one’s neighbor as oneself, he found in the Darwinian doctrines of self-preservation and social instinct: by reason of selection, we are designed to preserve our own ego’s integrity but also to cooperate in promoting the welfare of our community. Five years later, in *Die Lebenswunder* (The wonder of life, 1904), Haeckel made clear his rejection—for “personal reasons,” as well as for good biological reasons—of the one-sided ethics of the “modern prophets of pure egoism, Friedrich Nietzsche, Max Stirner and the like.” They committed, he argued, a fundamental biological error:

Indeed, the natural commandments of sympathy and altruism not only arose in human society millennia before Christ; they were to be found

24. *Ibid.*, chap. 6.

25. *Ibid.*, chap. 8.

26. *Ibid.*, chap. 9.

27. *Ibid.*, chap. 11.

28. *Ibid.*, chaps. 16–17.

29. *Ibid.*, chap. 15.

30. Haeckel explicitly rejected Nietzsche’s extreme egoism. See *ibid.*, 463.

characterizing those higher animals that live in herds and social groups. These traits have their oldest phylogenetic roots in the formation of the sexes in the lower animals and in the sexual love and parental care upon which the preservation of the species rests.³¹

For Haeckel, this kind of evolutionary foundation gave theoretical substance to those native impulses that he himself felt, particularly in his relationship with Frida.

Haeckel was not insensitive to the contemplative repose and aesthetic satisfaction that Christian art—and especially medieval churches—offered the reflective individual. Such experiences had real value for creating a cohesive society and for producing a feeling of communal solidarity. He thought a continued social and educational evolution would transform the worship of a supernatural deity gradually into the enjoyment of a spiritually enriching nature. He even imagined—though he buried his musings discreetly in the fine print of the “notes and remarks” of *Die Welträttsel*—that something like Comte’s church of science might eventually be instituted:

In place of the mystical faith in supernatural wonders clear knowledge of the true wonders of nature would be introduced. The houses of God, as contemplative places, would not be decorated with holy pictures and crucifixes but with representations of the uncreated realm of natural beauty and the lives of men. Between the high pillars of the Gothic dome, entwined by liana vines, slender palms and ferns, delicate banana and bamboo would remind us of the creative power of the tropics. In large aquariums beneath the church windows, charming medusae and siphonophores, colorful corals and starfish would exemplify the “art forms” characterizing the life in the sea. At the high altar, a “Urania” would step forth to explain the omnipotence of the laws of substance governing the motions of the planets. Indeed, there are now numerous educated people who find their real edification, not in listening to prolix and meaningless sermons but in attending public lectures on science and art, in the pleasures of the limitless beauty that flows in inexhaustible streams from the womb of our Mother Nature.³²

31. Ernst Haeckel, *Die Lebenswunder: Gemeinverständliche Studien über Biologische Philosophie, Ergänzungsband zu dem Buche über die Welträttsel* (Stuttgart: Alfred Kröner, 1904), 131.

32. Haeckel, *Welträttsel*, 463. This passage was omitted from the English edition.

Though Haeckel presented to the world the face of a coldly rational man of the modern scientific age, the mask occasionally slipped and the Goethean Romantic looked back on a world still resonant of a deeply spiritual, not to say mystical, core.

A large portion of the educated public reacted to Haeckel's *Welträthsels* with cataclysmic furor. Those of an orthodox religious temper execrated the book (as I have indicated in the previous chapter). Beyond those with theological concerns, the attitude was still virulent enough that Haeckel feared some reprisals from the government. Even, as he said, in freethinking Jena, the response to the book had been highly negative.³³ The deepest wound, however, came from his dear friend Gegenbaur. He anticipated his old colleague's reaction—or nonreaction: "Gegenbaur (like many other close friends!) has not written me one word about it! He shares my views completely, from beginning to end!—He has always been of the opinion, however, that esoteric secrets are not to be revealed to the larger public—and, besides, he disapproves of my sharply aggressive mode of expression."³⁴ Haeckel found his fears realized when he traveled to Heidelberg in August 1900 to celebrate his friend's seventy-fourth birthday. Gegenbaur received him coolly. His onetime colleague had not read the book but had read the review written by their old friend Kuno Fischer, who called the book a "wretched effort" (*Machwerk*). Though Gegenbaur in the past invited his colleague to stay in his home, this time he did not. Haeckel walked to the Necker Bridge in the rain, stood there, and wept.³⁵ When Gegenbaur died three years later (1903), Haeckel felt remorse anew that his *Wurstbuch*, as his onetime colleague called it, had destroyed their forty-six-year friendship.³⁶

The Consolations of Love

During the time when his book jolted the intellectual public to reaction—and certainly it was not all negative; the sales and congratulatory letters confirm that—Haeckel enjoyed the frustrating consolation of his affair with Frida. Though qualms of conscience had kept them apart since their second meeting in July 1899, she agreed to see him at the end of the follow-

33. Haeckel to Frida (19 October 1899), in *Das ungelöste Welträtsel*, 1:315.

34. Haeckel to Frida (1 March 1900), in *ibid.*, 1:405–6.

35. Haeckel to Frida (31 August 1900), in *ibid.*, 2:554.

36. Haeckel to Max Fürbringer (12 August 1903), in *Ernst Haeckel: Biographie in Briefen*, 282.

ing March. She initially proposed that they rendezvous in Naumburg, taking a hotel suite with two bedrooms and a sitting room between, and that she register as his daughter.³⁷ They finally met on 31 March in Magdeburg. The meeting confirmed Haeckel in his love for Frida, as he recounted to her the next day:

Dearest, best, truest wife! So I might now call you, you who after some considerable worry opened to me the entire depths of your marvelous soul and unfolded the entire magic of your ideal person! You tell me and write, my dear Frida, that I should not idealize your person. Love, I cannot do that—since you are my ideal—the real ideal of a living wife, who with me finds the true religion in the cult of the true, the good, and the beautiful. . . . After I waved the last good-by at your departure this morning at 6:15, I remained another two hours in our romantic hotel!! Your “great mad child” committed all sorts of foolishness—washed himself yet again “from top to bottom” out of your washbasin, celebrated solemn memories in each of the two magical rooms—numbers 17 and 16—and delighted in yours, etc., with a princely tip [to the staff]. Two hours later, as I traveled from Magdeburg to Berlin, I read in Goethe’s letters to Charlotte von Stein only your dedication [she gave the volume to him] and the few sentences you underlined. The entire remaining time (two and a half hours) I reveled in the sweetest memories.³⁸

Frida had her own memories of their night together: “You write that the touch of my hand has benefited you. The moment when you had permitted me to lay my hand gently on your body—that remains for me an unforgettable time.”³⁹

After this one-day excursion, they planned another tryst, in view of a long journey Haeckel was planning for the late summer and winter of 1900–1901. On 1 June they met at Plauen (about fifty miles south east of Jena) and then traveled to Munich the next day. They spent five days there in the Hotel Grünwald, leaving 7 June, and then on to Erfurt and Sangehausen (about fifty miles north of Erfurt). On 9 June they journeyed to Bad Frankenhausen, a cure resort. They departed from one another on

37. The letters in which Frida suggests this meeting have not survived. However, Haeckel’s nephew Heinrich Haeckel made extracts of the letters. See *Das ungelöste Welträtsel*, 3:1140–41.

38. Haeckel to Frida (1 April 1900), in *ibid.*, 1:410–11.

39. This is from Heinrich Haeckel’s extract of a no longer extant letter. See *ibid.*, 3:1174.

11 June. Frida's diary, pages of which she sent to her beloved, memorializes their time together:

In the cave of Barbarossa [a large tourist attraction near Frankenhausen] you were completely bewitched. You felt my power more than usual, or otherwise how were you drawn so strongly to my lips? Our charming trip in the one-horse carriage.—Our sweet union in the small, quiet rooms. Can I tell you how gladly I stroked your lovely body and how often I now do it in my imagination! Marriage = belonging together soul and body—that is the sweetest that union can bestow here below.—If I were your legal wife, then you would lay your lovely head on my breast and with your hand press my little electric buttons [*elektrische Knöpfchen drückst*], while I would caress you softly and sweetly, my sacred one. Amen.⁴⁰

One of the marvelous attractions of the World's Fair Exposition in Paris, which received wide publicity and which Haeckel would shortly visit, was the electrification of the buildings; with a press of an electric button, a room would glow with warmth and brilliance. One century ended and a new had begun, with hope and possibilities for a new kind of life.

Second Journey to the Tropics—Java and Sumatra

Haeckel had been planning a second voyage to the tropics for a while. Some admirers thought he intended to build on the work of his protégé, Eugène Dubois, by finding further evidence of the missing link. He dismissed that notion, though perhaps not completely, since he would engage in some protracted study of the apes of Malaya, the anatomical features of which he believed provided surer evidence of descent than scattered paleontological remains.⁴¹ His stated reason for the journey was to complete his plankton studies and to gather more interesting exhibits for his *Kunstformen der Natur*, which began appearing in a folio series in 1899.⁴²

Haeckel had planned some ten installments in the series, which would then be published as a whole in a large folio volume. Each installment

40. From Heinrich Haeckel's extract of a no longer extant diary entry. See *ibid.*, 3:1177.

41. Ernst Haeckel, *Aus Insulinde: Malayische Reisebriefe* (Bonn: Emil Strauss, 1901), 218–19. Other rumors sprung up. Haeckel heard that Cornelius Vanderbilt and Jay Gould had funded a rival expedition to find evidence of the missing link (*ibid.*).

42. *Ibid.*, 3–6.

would have ten beautifully lithographed plates by Adolf Giltsch, the printer with whom Haeckel worked on many of the atlases for his systematic investigations. With the help of Frida, he carefully chose illustrations from his previous volumes on marine invertebrates for inclusion in the fascicles. The journey to Malaya would supply material for several new paintings of exotic creatures observed in the jungles and pulled up from the crowded seas around the islands. All of the illustrations would be reproduced in lithographs of vibrant color or stark black and white. Haeckel expressed the premise of the series in the introduction to the first installment: "Nature generates from her womb an inexhaustible plethora of wonderful forms, the beauty and variety of which far exceed the crafted art forms produced by human beings." But because creatures displaying these wondrous structures lay hidden in the depths of the ocean or camouflaged in the jungle, they remained inaccessible to the lay public. Haeckel thus wished to make visible to a wider audience the extraordinary artistry of nature that the science of the nineteenth century had uncovered. He also hoped his series would provide "a rich cornucopia of newer and more beautiful motifs" for modern artists.⁴³ This hope would be realized during the next several decades as his *Kunstformen der Natur* (1899–1904) had a decided impact on the movement of *Jungenstil* (Art Nouveau) in Europe.⁴⁴ Even today selections from his *Kunstformen* continue to be reproduced as aesthetic exemplars.

So Haeckel had his professional and artistic justifications for setting out on an extensive journey to the tropics. But he revealed a more personal, underlying motive in his letters to Frida: he simply could not abide the thought of spending another winter confined to his own gloomy home and depressive family. He obviously betrayed his feelings to his wife, since Agnes thought he would never return to their home.⁴⁵ He left Germany with regret because of the distance between him and his "true wife." The memories of his last rendezvous with her in June, though, would carry him sweetly along for a while. And, of course, even old men dream of native girls bringing breadfruit.

43. Ernst Haeckel, "Vorwort," in *Kunstformen der Natur* (Leipzig: Bibliographischen Instituts, 1904).

44. Christoph Kockerbeck traces some of the lines of Haeckel's aesthetic influence in *Ernst Haeckel's 'Kunstformen der Natur' und ihr Einfluß auf die deutsche Bildende Kunst der Jahrhundertwende* (Frankfurt: Peter Lang, 1986). Kockerbeck focuses on the work of the Munich sculptor and painter Hermann Obrist (1863–1927) and his friend the architect August Endell (1871–1925), but seems unaware of the impact on René Binet (1866–1911), architect and designer of the Paris Exposition—see below.

45. Haeckel to Frida (31 August 1900), in *Das ungelöste Welträtsel*, 2:555.

Haeckel departed Jena on 21 August 1900 but initially headed for Paris to spend a few days at the World's Fair with his nephew Heinrich Haeckel (son of his brother, Karl), who was chief of hospital in Stettin. He undoubtedly walked through René Binet's extraordinary gate that opened off the Champs-Élysées onto the midway of the fair (see fig. 10.3). That gate rose up like some giant radiolarian, and not by accident. Binet explained to Haeckel that the gate and various ornamental features of the fair's buildings had been inspired by the scientist's radiolarian work.⁴⁶ From Paris, Haeckel traveled to Basel to confer with Paul von Ritter, whose foundation supported a professorship in Haeckel's honor at Jena and who was planning to commission a statue of Haeckel (which was never produced). Finally on 4 September, he boarded the North German Lloyd steamer *Oldenburg* in Genoa. As the ship entered the bay of Naples on 5 September, Haeckel's thoughts traveled back to 1859, when he roamed the island of Capri with Allmers. The Neapolitan melodies that drifted over from the island "made my heart heavy in thought of the loved ones left at home to whom I said good-by for nine months."⁴⁷ The ship passed through the Suez Canal on 9 and 10 September, and then took twelve more days to reach Ceylon. While gazing out on the Indian Ocean from the ship's rail, Haeckel made many observations about the abundant life of the sea: myriads of siphonophores floating just below the glasslike surface of the water and squalls of medusae and jellyfish. But here, too, his ruminations took him back to Frida and their plight. He repeated to himself the couplet: "Resignation, the most serene word of release, / Only this opens for us the gates of peace."⁴⁸ On 2 September the ship sailed into the harbor at Colombo, which rekindled memories of his earlier travels to Ceylon. After a brief visit, the ship sailed for five more days, passing through the Straits of Malaka to Singapore, where it dropped anchor for several days. While in Singapore, Haeckel spent his time in the Raffles Museum and Garden, where he examined the exotic

46. Binet initiated a correspondence with Haeckel in 1899, when he indicated to him that he had read the *Challenger* volumes on radiolarians; he was especially interested in their artistic features, their "architectural and ornamental" qualities. See Binet to Haeckel (21 March 1899), in the Haeckel Correspondence, Haeckel-Haus, Jena. As his *Kunstformen der Natur* was published in fascicles, Haeckel would send Binet copies. Robert Proctor illuminates the relationship between Binet's architectural designs and Haeckel's biological depictions in his "Architecture from the Cell-Soul: René Binet and Ernst Haeckel," *Journal of Architecture* 11 (2006): 407–24.

47. Haeckel, *Aus Insulinde*, 14–15.

48. *Ibid.*, 22: "Resignation, dies herbeste aller Worte, / Eröffnet uns allein des Friedens Pforte!"

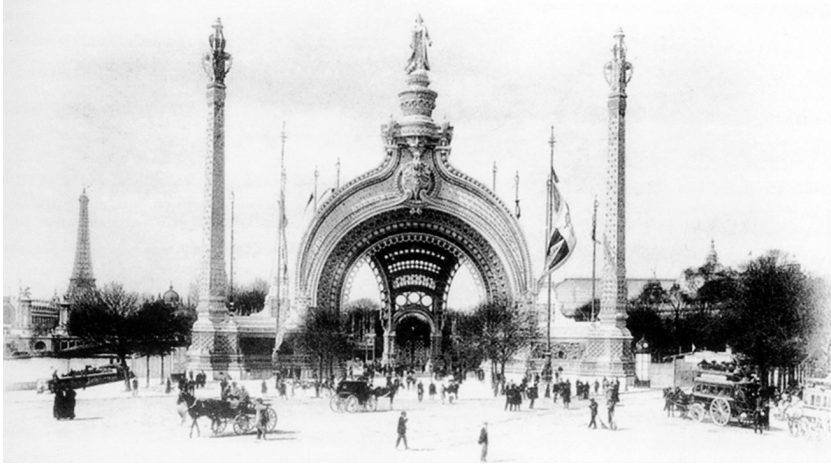


Fig. 10.3. René Binet's Porte Monumentale at the Paris Exhibition of 1900.
(From the author's collection.)

plant life and took to strolling along with a young orangutan from the zoo.⁴⁹ Finally, on 13 October, he loaded his fourteen cases onto the steamer *Stettin* and made for Java in the Dutch East Indies, arriving in the harbor of the principle city, Batavia (now Jakarta), on 15 October.

Not fifteen minutes after he disembarked in the port city, Haeckel had his pocket picked. He lost a wallet that Frida had made for him, as well as his passport.⁵⁰ He left those troublesome environs rather quickly, traveling some fifty miles outside of the city to the gardens of Buitenzorg ("without worry," now Bogor), where he was hosted by the director of the Botanical Institute, Melchior Treub (1851–1910). Haeckel spent two and a half months at the institute, his stay prolonged by the aggravation of an old knee injury compounded by arthritis in the joint. Despite his generally vigorous health, this kind of travel adventure proved arduous for a man of sixty-six years.

Haeckel's convalescence offered opportunity to study the exotic plant life of the gardens—including fossil plants—and various organisms brought to him by neighboring children, invertebrates such as horseshoe crabs (which he regarded as the living descendents of trilobites) and a slew of lower vertebrates. He had become convinced by his experience of Dar-

49. Sir Thomas Stamford Raffles (1781–1826) had bought the island of Singapore from the sultan of Johor and established there a natural history museum and botanical garden. Later he founded the Zoological Society of London.

50. Haeckel to Frida (21 October 1900), in *Das ungelöste Welträtsel*, 2:573.

win's English garden that one had to investigate organisms in light of their "ecology" (*Oekologie*), that is, "the relation of plants and animals to their environment."⁵¹ One particular feature of the environment that seemed quite significant was the climate—Java hardly had any seasons, only a kind of endless summer. That gave some promise that the phylogenetic history of many of the region's plants might be read off their individual development, since adaptations to the seasons seemed not to be a factor.⁵² He also had the leisure to investigate various embryos—fish, amphibians, reptiles, and mammals—which he sealed up in tubes for the return.⁵³ These specimens likely led him to the further comparative displays of the biogenetic law in the fifth (1903) and sixth (1910) editions of his *Anthropogenie* (see conclusion to the previous chapter).

While at Buitenzorg and in the highlands of Java, Haeckel both painted in oils (see plate 8) and took photographs of local scenes, particularly of native groups. This set him to considering the comparative advantages of the painterly eye over the mechanical eye for rendering the true character of the vegetation that lay in the complex weave of the tropical forest:

In the colorful confusion produced by the mass of tangled plants, the eye vainly seeks a resting place. Either the light is reduced and distorts the thousands of crisscrossed branches, twigs, and leaf surfaces—themselves covered with a chaos of epiphytes—or the light of the overhead sun shines brightly through the gaps of the tree crowns and produces on the mirrored surface of the leather-like leaves thousands of glancing reflections and harsh lights, which allow no unified impression to be gathered. In the depths of the primitive forest, the various complexes of light are extraordinary and cannot be simply reproduced by means of photographs. . . . Only the carefully wrought sketch can bring out the true character of the primeval forest. . . . A good landscape painter—especially when he possesses botanical knowledge, is able in a larger oil painting to place before the eye of the viewer the fantastic, magical world of the primeval forest in a realistic way.⁵⁴

For the representation of plants—and animals rapidly passing through increasingly complex stages of development—the steady painterly eye of the

51. Haeckel, *Aus Insulinde*, 75.

52. *Ibid.*, 77–80.

53. *Ibid.*, 92.

54. *Ibid.*, 106–8.

artist-scientist captured a truer, more precise rendering of living organisms than the shuddering, light-perplexed eye of the camera. Haeckel, like all competent illustrators, recognized that in photographs lighting posed serious problems—natural light and shadow might obscure some structures and distort others. The botanical or anatomical illustrator, by contrast, is able to manipulate light and produce shadings impossible in a natural setting, so as to render structures as they “really” are.⁵⁵ (See the previous chapter for further considerations about the contrast of photography to illustration.)

In mid-January 1901 Haeckel traveled through the south-central part of Java, mostly by train. His excursion convinced him that the island was the most beautiful he had ever visited. But it was not only the scenes of exotic plants and animals that captured his attention; his naturalist’s eye also alighted on the peoples of the region and their customs and habits. He became completely enamored of the colorful life of cities, like Djokja, in the mid-part of Java. Here the camera could be used to best advantage; and he filled the travel book that came out of this trip, his *Aus Insulinde: Malayische Reisebriefe* (From the Islands: Malayan travel letters, 1901), with photographs of villagers and townspeople in their bright costumes and in their bare-breasted beauty.

Haeckel returned to Batavia at the end of January to gather his materials. On 23 January he boarded the steamer *Princess Amalia*, sailed past Krakatau (which had exploded in a mighty eruption in 1883, producing the loudest sound ever experienced by human beings), and landed in the harbor of Padang, Sumatra, two days later. He was shown hospitality by the chief engineer of the Dutch rail system on the island, a Mr. Deiprat. Shortly after arriving, he again injured his left knee, which laid him up for some four weeks. During that time he amused himself by giving biological instruction to Deiprat’s two daughters, one fourteen and the other sixteen years old. He used his *Natürliche Schöpfungsgeschichte* and *Kunstformen* as his texts.⁵⁶ Despite an immobile convalescence, he did get a bit of work done; he had native divers at his disposal, who furnished him specimens from the waters around Padang. And the German consul on the island supplied him with apes, large land turtles, and reptiles for his study.

55. I have discussed these problems of light and shadow with Alta Buden, anatomical illustrator, who pointed out that in her renderings of structures, the shadings and bright areas could never occur in nature—or even under artificial light—though the illustrations were designed to prove true to nature. Helmholtz considered these and other problems that painters faced in rendering scenes true to life. See Hermann von Helmholtz, “Optisches über Malerei,” in *Vorträge und Reden*, 3 vols. (Braunschweig: Friedrich Vieweg und Sohn, 1884), 2:97–137.

56. Haeckel, *Aus Insulinde*, 184–85.

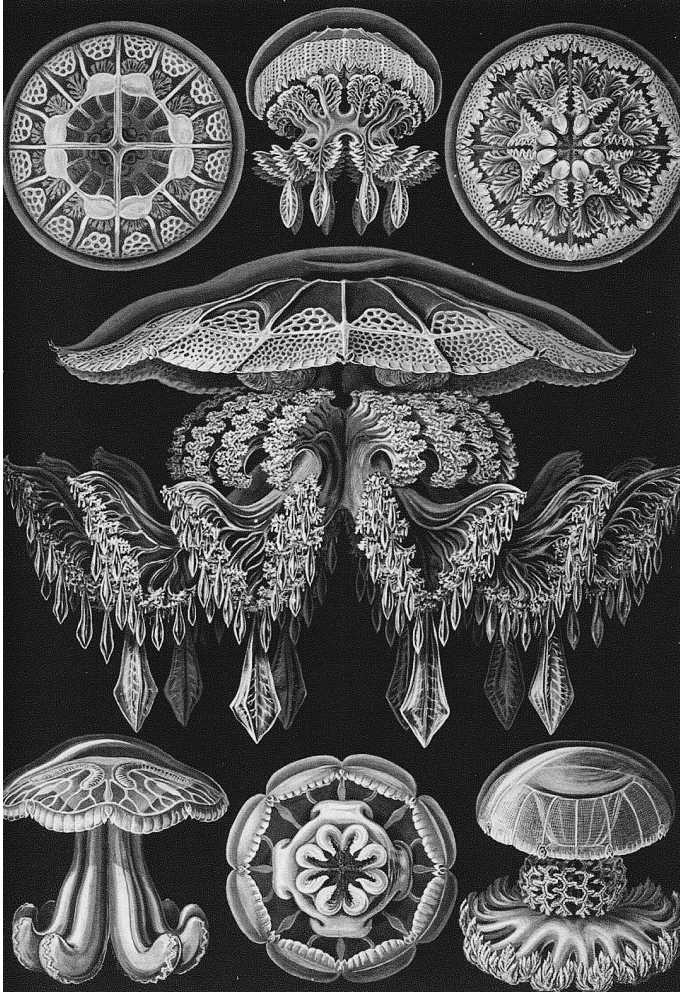


Fig. 10.4. *Discomedusa Rhopilema Frida* (center): "This magnificent new species of the genus *Rhopilema*, one of the most beautiful of the medusae, was captured on 10 March 1901 under the equator in the Malaccan Straits. It bears its name as a remembrance of Fräulein Frida von Uslar-Gleichen, the artistic friend of nature, who has advanced the 'Kunstformen der Natur' in numerous ways by her exquisite judgment." (From Haeckel, *Kunstformen der Natur*, 1904.)

When his knee healed sufficiently, Haeckel spent the last two weeks on the island traveling by train to various towns and villages. Again, the sociological and anthropological features of the population continually stimulated his interest. He noted, for instance, that the Islamic religion's usual restrictions on women had to accommodate the matriarchal structure of

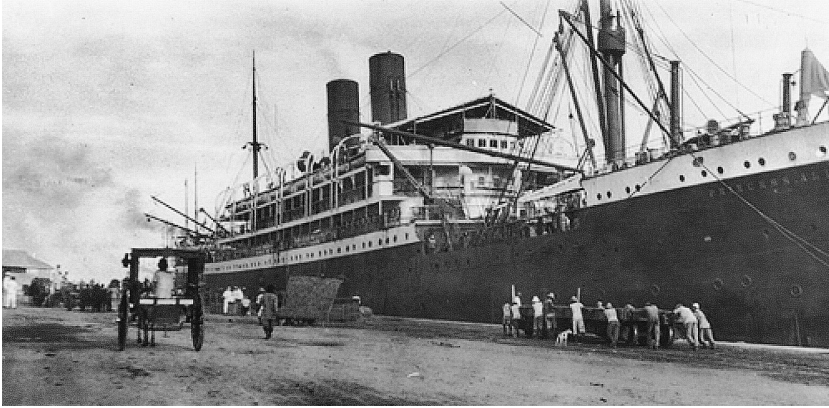


Fig. 10.5. Hamburg German-American liner Kiautschou (launched 1900); renamed *Prinzess Alice* (1904); seized by Americans during World War I (1917) and renamed *Princess Matoika*; the ship in 1917. (Courtesy of Naval Historical Center, Department of the U.S. Navy.)

social life in the Sumatran villages: women were not sequestered at home; they were not compelled to hide behind the veil; and divorce was rather easy for both sexes.⁵⁷ Haeckel thought Sumatran matriarchy produced in the people a more forceful, independent nature than could be found among the Javanese. That prideful spirit, he observed, caused the Dutch colonial power many more difficulties than they encountered elsewhere. The Dutch, in their turn, seemed to have absorbed many local traits, including wild superstitions. Haeckel was rather astonished that quite well-educated planters and businessmen might try to convince him that, for instance, putting a pearl in a sack of rice and burying the sack would yield several small pearls as offspring. The Dutch also yielded to stories of ghosts and sprits. Haeckel concluded that one should not be surprised that native peoples harbored strange convictions since more civilized individuals could be brought to comparable credulity.⁵⁸ While he did not think the Malayan people had achieved much by way of civilization—at least compared to the other branches of the Mongolian family (e.g., Japanese and Chinese)—he concluded that their customs and ways of life ought not be suppressed by the occupying colonial powers nor should the natives be subjected to missionary efforts at conversion.⁵⁹ The same kind of intricate ecological relationships Haeckel found

57. *Ibid.*, 242–43.

58. *Ibid.*, 210–11.

59. *Ibid.*, 241.

amidst plants and animals, he also discovered characterizing the peoples of these tropical islands, both the native and the European.

On 5 March 1901 Haeckel boarded the Dutch steamer *Soembing* with all his specimen crates, diary notes, sketchpads, and canvases. And after transfer to the 2,000-passenger Hamburg-American luxury ship *Kiautschou*—outfitted with electric lights, fans, and refrigeration for good Munich beer—he enjoyed a very pleasant journey back to Genoa, where he disembarked on 2 April. He could not quite bring himself to rush back to Jena. With the excuse of a hobbled knee, he stopped at Baden-Baden for three weeks to take the waters and decompress. He finally returned home on 28 April. Though the whole eight-month excursion really yielded little by way of scientific results, he did accomplish his primary mission, which was to avoid spending a thoroughly miserable winter at home.

Growth in Love and Despair

Haeckel dedicated his travel book, *Aus Insulinde*, to “his true life’s partner [*Lebensgefährtin*], Frau Agnes Haeckel”; but during the trip he kept in constant communication with his “true bride,” Frida von Uslar-Gleichen. As soon as he arrived in Italy, he wrote Frida, begging her to join him at Baden-Baden; since, after all, she too had injured her knee. She responded that because she was neither too old nor too ugly, no one would believe their friendship was only platonic.⁶⁰ And she herself certainly did not believe that they could be merely spiritual friends: “The reunion you desire is not to exchange spiritual thoughts unhampered by distance but only to have me physically, to kiss and embrace me, and I’m too weak and love you too much to deny you this poor consolation since I know how much you hunger for it.”⁶¹ Though she expressed irritation at his presumption, she nonetheless finally yielded to the plan for another meeting. They rendezvoused at a clinic near Göttingen, where she was receiving some therapy for her own knee; and on 26 April, they traveled ten miles to Münden, where they took adjoining rooms at the Hotel Tivoli and enjoyed two days that, as Haeckel later wrote her, “filled my heart with new joy and will be forever unforgettable.”⁶²

During the course of their relationship, Frida had pressed to meet Haeckel’s beautiful daughter Elisabeth and his son, Walter, and Agnes as well.

60. Frida to Haeckel (4 April 1901), in *Das ungelöste Welträtsel*, 2:618.

61. Frida to Haeckel (14 April 1901), in *ibid.*, 2:626.

62. Haeckel to Frida (27 April 1901), in *ibid.*, 2:639.