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## Anna Semper (1826–1909) and the female scientist in modern Germany

### Abstract

This article uses the work of Anna Semper (1826–1909) to explore the possibilities for understanding women’s contributions to the development of science in Germany from the second half of the 19<sup>th</sup> century to the beginning of the 20<sup>th</sup> century.

By examining the publications of her husband, the naturalist Carl Semper (1832–1893), as well as those of other scholars, traces of the ways that she produced scientific knowledge begin to emerge.

Because the Sempers’ work took place in the context of the Philippines and Palau, two different Spanish colonies, and formed the basis of Carl’s professional career, this article also analyzes Anna’s role in the creation of an explicitly colonial science.

PUBLICATION INFO		e-ISSN 2543-702X ISSN 2451-3202		 DIAMOND OPEN ACCESS
<b>CITATION</b> Weston, Nathaniel Parker 2020: Anna Semper (1826–1909) and the female scientist in modern Germany. <i>Studia Historiae Scientiarum</i> 19, pp. 261–285. DOI: <a href="https://doi.org/10.4467/2543702XSHS.20.009.12565">10.4467/2543702XSHS.20.009.12565</a> .				
RECEIVED: 11.09.2019 ACCEPTED: 22.08.2020 PUBLISHED ONLINE: 30.09.2020		ARCHIVE POLICY <a href="#">Green SHERPA /</a> <a href="#">RoMEO Colour</a>	LICENSE 	
WWW	<a href="https://ojs.ejournals.eu/SHS/">https://ojs.ejournals.eu/SHS/</a> ; <a href="http://pau.krakow.pl/Studia-Historiae-Scientiarum/archiwum">http://pau.krakow.pl/Studia-Historiae-Scientiarum/archiwum</a>			

**Keywords:** *Anna Semper, Carl Semper, colonial science, female scientists, natural history, history of biology, history of zoology, history of anthropology, history of ethnography, industrial Germany, colonial Germany, the Philippines, Palau*

## Anna Semper (1826–1909) i kobieta naukowiec w nowożytnych Niemczech

### Abstrakt

Artykuł wykorzystuje prace Anny Semper (1826–1909) dla zbadania możliwości zrozumienia wkładu kobiet w rozwój nauki w Niemczech w II poł. XIX w. i początkach XX w.

Dzięki zbadaniu publikacji jej męża, przyrodnika Carla Sempera (1832–1893), a także innych naukowców, zaczynają wyłaniać się ślady sposobów, w jaki tworzyła ona wiedzę naukową.

Ponieważ praca Semperów dotyczyła Filipin i Palau, dwóch różnych hiszpańskich kolonii, i stanowiła podstawę kariery zawodowej Carla, artykuł analizuje także rolę Anny w tworzeniu jawnie kolonialnej nauki.

**Słowa kluczowe:** *Anna Semper, Carl Semper, nauka kolonialna, kobiety-naukowcy, historia biologii, historia zoologii, historia antropologii, historia etnografii, przemysłowe Niemcy, kolonialne Niemcy, Filipiny, Palau*

### 1. Introduction<sup>1</sup>

In 1858, the German naturalist Carl Semper<sup>2</sup> began his travels in the Philippines, where he met Anna Herrmann, the sister of a German merchant in the Spanish colony, whom he eventually married there.<sup>3</sup> She worked

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<sup>1</sup> This article originated with my dissertation (see Weston 2012) and it now forms a part of a larger work in progress on Carl Semper, German colonial science, and their legacies.

<sup>2</sup> During his life Semper used two versions of his first name in his works: Carl and Karl. To avoid confusion of these names in the narration of this article, I assume the following convention. When the name “Semper” alone is mentioned (without any first name), it signifies the same person Carl / Karl Semper. Otherwise, he will be referred to as Carl Semper.

<sup>3</sup> Schuberg 1895, pp. v–vi. Carl Semper (1832–1893) was a zoologist and ethnographer whose work derived from his travels in the Spanish colonies of the Philippines

collecting and illustrating numerous animal specimens alongside her husband, who frequently credited her for her contributions to his zoological studies that resulted from his nearly seven-year stay in the Philippines. Through Semper's publications, we can gain important, even if only partial, insights into Anna's work as a scientist. Steven Shapin writes that people who performed secondary functions in the production of knowledge were "invisible" technicians and Caroline Criado Perez and Judith Tyner examine women's invisibility in different branches of science.<sup>4</sup> Yet, in the case of Anna Semper, her work was visible to a certain extent in the published studies of her husband and other male scholars.

The research method applied here involves close readings of these writings to focus on the traces of scientific activity enacted by a woman in the nineteenth century. Much of what is known about the scientific toils of Anna Semper will be derived from the life and work of her husband: in fact, the biographical method is one that has a long tradition in writing about women's contributions to science. Londa Schiebinger explains that encyclopedias on female natural scientists originated in the European context in the late 1700s.<sup>5</sup> Yet, biographies could not be written if women's scientific activities were completely obscured.

With the professionalization of science during the nineteenth century, nearly all women were excluded from the field with the middle-class norm of the separation of spheres relegating them to the largely invisible domain of the home, performing unpaid work caring for family members and domestic space, whether as laborers or managers, depending on their class status. Without women playing such essential supporting roles, however, men could not advance in their public careers, although this dynamic is challenging to observe in the discipline of history, dependent as it is on the study of documents, themselves created in male-dominated contexts that naturally marginalize the vital parts played by women in freeing men's public activities. Reading between

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and Palau – cf. *Wikipedia* 2020a; 2020b. Anna Semper collaborated with her husband, collecting and illustrating animal specimens for his studies of sea-cucumbers and snails in addition to translating his work into English – cf. Semper 1868a; 1868b; 1870.

<sup>4</sup> Shapin 1989; Criado Perez 2019; Tyner 2020.

<sup>5</sup> Schiebinger 1999, p. 22.

the lines of men's writing offers historians and other scholars the possibility of exposing women's work behind the scenes.

Prior to the domestication of women's scientific contributions and work in general in the early industrial era, certain women established extensive careers in science. Born in Frankfurt in the mid-seventeenth century, for example, Maria Sibylla Merian was perhaps the most prominent female naturalist in Europe prior to industrialization. Schiebinger has studied her work in the context of European colonialism in the Americas and at the time when a woman could travel independently to another continent to study nature, although this was still extraordinary.<sup>6</sup> Merian ultimately published books of her illustrations of plants and animals previously unknown to European science.<sup>7</sup> An English-language history of notable women artists written by one, "Mrs. Ellet," in the United States in the nineteenth century lauded Merian's achievements, but emphasized her work as an artist rather than as a scientist, as if the former was more acceptable than the latter for women and their designated places within the private sphere.<sup>8</sup>

This article will analyze the known contributions of Anna Semper to the publications of her husband Carl Semper as well as those of other scholars. It will first describe Anna's and Carl's lives up to their return to Europe from the Philippines. Then, it will examine Anna's work as a naturalist as seen in Carl's early publications. Finally, it will look at the places of Anna's achievements in her husband's and other scholars' publications to show how they constituted a subtle scientific and colonial legacy despite the cult of domesticity continuing to segregate women's work into the private sphere. Ultimately, this article suggests that researching the publications of male scholars offers the potential for discovering certain scientific contributions by women, whether in colonial settings or elsewhere.

Schiebinger defines colonial science as:

[A]ny science done during the colonial era that involved Europeans working in a colonial context. This includes science done in Europe that drew on colonial resources

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<sup>6</sup> Schiebinger 2004. Other works on Merian include Rücker 1967; Davis 1995; Schmidt-Loske 2007.

<sup>7</sup> See, for example, Merian 1679; 1705.

<sup>8</sup> Ellet 1859.

in addition to science done in areas that were part of Europe's trading or territorial empires.<sup>9</sup>

Carl Semper's work in the Philippines and Palau was conducted in colonies and Anna Semper's contributions also benefitted from these contexts.<sup>10</sup> This article therefore illustrates that German women could be part and parcel of men's colonial scientific activities, even when they occurred in a colony not possessed by Germany.

## 2. Travels in the Philippines

The most influential naturalist in the nineteenth-century world was the German Alexander von Humboldt, who paved the way for the work of Charles Darwin and others by unifying geology, botany, zoology, ethnography, and other disciplines into a single portrait of the regions he studied.<sup>11</sup> In his five-volume work *Cosmos*, Humboldt combined aesthetic and scientific perspectives to present a comprehensive view of nature, analyzing earthquakes, volcanoes, meteorology, climatology, and geography, as it related to plants, animals, and human beings.<sup>12</sup> The professionalization of natural history in Germany began in 1822 with the founding of the German Society of Naturalists and Medical Doctors.<sup>13</sup> Humboldt became co-editor of the Society's journal in 1828.<sup>14</sup>

This interdisciplinary method influenced Carl Semper, who was born in the Altona district of Hamburg in 1832, son of Elisabeth née Heyne

<sup>9</sup> Schiebinger 2005, p. 52.

<sup>10</sup> Other European women performed scientific work before 1900, but always within colonial contexts, where restrictions on their activities could not be enforced in the same way as in Europe. The French naturalist Jeanne Baret (1740–1807) posed as a man on Louis Antoine de Bougainville's voyages in the Pacific Ocean during the 1760s. The British biologist and botanist Marianne North (1830–1890) traveled the world painting flora in the Dutch East Indies, British Ceylon, Australia, New Zealand, and South Africa. The German naturalist Amalie Dietrich (1821–1891) worked in Australia collecting animal and plant specimens as well as human remains and artifacts for museums in Germany. Finally, the British naturalist Mary Elizabeth Barber (1818–1899) worked in South Africa. Hammel 2016, pp. 121–122.

<sup>11</sup> Cannon 1978, esp. ch. 3 "Humboldtian Science."

<sup>12</sup> Humboldt 1845–1862. Unless otherwise stated, all translations by the author.

<sup>13</sup> Jacquin, Littrow 1832, p. 1.

<sup>14</sup> Jacquin, Littrow 1832, p. 20.

and the industrialist Johann Karl Semper. He pursued comparative morphology, the study of animal forms, and histology, the anatomy of cells and tissues, at the University of Würzburg before completing his doctorate there in 1856. Semper left Hamburg in June 1858 for the Philippines, traveling around the Cape of Good Hope and through Singapore and China, before arriving in Manila in December.<sup>15</sup> Anna Herrmann was born in Hamburg in 1826.<sup>16</sup> Although little is known about her early life, it is clear that sometime before 1861, she went to live in Manila, where her brother Moritz Herrmann worked as a merchant.<sup>17</sup> German women overall had little chance to pursue science formally due to their near-complete exclusion from higher education until the late nineteenth century.<sup>18</sup>

During the first six months of his stay, Semper studied the Philippines and its inhabitants as well as the Spanish language and made excursions around Manila to investigate local zoological species. In August 1859, he traveled to the southern islands on a seven-month trip, performing zoological, natural historical, and ethnographic studies, returning to the colonial capital in March of the following year. Semper then traveled for the next several months in the northern island of Luzon on two journeys, inquiring into the peoples, animals, and plant life, before falling ill with dysentery in November 1861 and returning to Manila, where he met Anna, who helped nurse him back to health. A local doctor then advised him to take a trip to sea to aid in his recovery, so Semper traveled to the Palau Islands in the Western Carolines. After his return to Manila, he married Anna on April 13, 1863 and the two traveled together to several southern and central islands in the Philippines, to study various plant and animal species. They ultimately left the Spanish colony in May 1865, arriving back in Altona in July.<sup>19</sup>

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<sup>15</sup> I use an excerpt from my dissertation here – see Weston [2012](#), p. 25. In other such instances below, I merely cite the dissertation.

<sup>16</sup> Schuberg 1895, p. v; Hempel 1996, p. 257. Lynn K. Nyhart examines Semper's influence on the study of zoology in nineteenth-century Germany, writing that the "Humboldtian" tradition of natural history that provided the main avenue for zoological research before mid-century did not separate zoology from other areas of inquiry but instead viewed animals, plants, and the earth itself in interacting pieces of a self-sustaining whole" (Nyhart 1995, p. 91). Also, see Weston [2012](#), p. 24.

<sup>17</sup> Semper 1869; Bacareza 1980, p. 44.

<sup>18</sup> Mazón 2003.

<sup>19</sup> Schuberg 1895, pp. v–viii; Hempel 1996, p. 257.

### 3. Building a career

In 1868, Semper published his first full-length work resulting from his expeditions in the Philippines. It was an album describing and depicting several species of sea-cucumbers from the Spanish colony. Anna made significant contributions to Carl's study, producing illustrations that appeared on twelve of the 'plates' (*Tafeln*) from the book and others which were next to ones created by her husband (see Fig. 1). The illustrations were professionally rendered, and it is impossible to distinguish the quality of her work from that of her spouse, except that Anna's may be more sophisticated due to the fastidious details she included.

Even though scientific study at the university level in Germany was exclusive to men for the most part, Anna apparently did not transgress her position as a middle-class woman by creating illustrations for her husband's publication. As David Blackbourn points out in his history of nineteenth-century Germany, unmarried women "were taught to sketch and play the piano so that they could appreciate art and music in a befitting manner."<sup>20</sup> Although producing scientific illustrations was more complex than creating sketches, the former could still be imagined by viewers as an extension of the latter. Yet, Anna took part in more scientific activities than just illustrating specimens, this in itself being a noteworthy endeavor. She also participated in collecting species. In two articles enumerating newly discovered species published prior to the Sempers' return to Europe, Anna's name appeared as the collector, showing that she not only partook in this all-important scientific work, but also that, like her husband, she found new animals and was credited for it. The items listed her as the collector of six different types of butterflies from the northern-most island of Luzon in the Philippines.<sup>21</sup>

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<sup>20</sup> Blackbourn 2003, p. 162. See also Weston [2012](#), p. 102, n. 26.

<sup>21</sup> Felder 1862, p. 292; Felder 1863, pp. 105, 108, 111, 122 & 124. In the process of the production of colonial science, the discoverer of a new species was the person who identified it as distinct from others. This was performed by a person with advanced training in biology. However, others without such training, including colonized people and European women, could still collect new species and be credited for this work. In order to understand this issue better, a historian of science must link the skills of a historian and a biologist. George Sarton analyzed this relationship in the context of the new humanism – see Kokowski [1996](#), pp. 224–231.



Fig. 1: Taf. XI. [In:] *Reisen im Archipel der Philippinen*. Vol. 1 *Holothurien* by C. Semper 1868a. (Fig. 1 of the *Colochirus coeruleus* by Anna Semper (center), Fig. 2 *Ocnus imbricatus* (upper left), Fig. 3 *Thyone villosa* (left), Fig. 4 *Cucumaria longipeda* (right), Fig. 5 *Cucumaria conjungens* (upper right), Fig. 6 of the *Cucumaria citrea* by Carl Semper (bottom right), Fig. 7 *Echinocucumis adversaria* (bottom left))

Following the publication of the album on sea-cucumbers from the Spanish colony, Anna's illustrations were commended by different reviewers. One review of the study appeared in French in the *Archives des Sciences physiques et naturelles*, a Swiss journal, and an English translation of it was published in the *Transactions of the Royal Microscopical*



*Society*, a British journal.<sup>22</sup> The reviewer, Édouard Claparède, remarked that the sea-cucumbers “have been figured with very great artistic skill, some by the author himself, others by Madame Anna Semper.”<sup>23</sup> In addition to illustrating and collecting species, Anna translated her husband’s writing into English. A short piece by Carl Semper appeared in *The Annals and Magazine of Natural History, including Zoology, Botany, and Geology*, a British natural history journal, and listed his spouse as the translator.<sup>24</sup> In a brief commentary on the item, the author J. E. Gray explained that the translation had been “made for me by his wife, Frau Anna Semper, to whom we are indebted for the beautiful figure of the Philippine *Holothuria*,” the scientific name for sea-cucumbers.<sup>25</sup>

She was thus recognized in several arenas for her work as an illustrator, translator, and collector of new animal species. In a review of Semper’s study of sea-cucumbers from the Philippines published in the *Jahres-Bericht der Schlesischen Gesellschaft für vaterländische Cultur* from Germany, an anonymous author described her as something of a pioneer. He wrote that the illustrations were created “in truly artistic execution, a merit in which the author and his wife share.” About Anna, the reviewer remarked further that she “is not the only woman who has immortalized herself in this manner scientifically, but she is the first to venture on such a difficult subject.”<sup>26</sup> Drawing a living animal was more challenging than illustrating a dead one or a plant, which lay still. She was not quite recognized as a scientist, but the writer nonetheless was forced to concede that she had accomplished an extraordinary feat.

In her study of eighteenth-century European scientific travel writing, Mary Louise Pratt points out that authors “produced commercially exploitable knowledge.”<sup>27</sup> The same was true of Semper’s study of sea-cucumbers that Anna vitally contributed to. Her aesthetic and detailed presentation of the species underscored the scientific aspects of these

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<sup>22</sup> C. [Claparède] 1868; [Anonymous<sub>1</sub>] [1868](#).

<sup>23</sup> [Anonymous<sub>1</sub>] [1868](#), p. 163.

<sup>24</sup> Semper 1868b, p. 372, n. European women translated scientific works written by men during this era – cf. Badulescu 1998; Martin 2011; Sanchez 2011. However, it was highly unusual, if not unique, for one to translate a study by her husband.

<sup>25</sup> Gray 1868, p. 373.

<sup>26</sup> [Anonymous<sub>2</sub>] [1870](#), p. 88.

<sup>27</sup> Pratt 2008, p. 33. This note is a modified paragraph from my doctoral thesis – see Weston [2012](#), p. 41.

animals as well as their value as commodities, which Semper discussed in the wider context of regional trade in his study. Seen as an aphrodisiac in China, he noted that sea-cucumbers can “sometimes realize high prices.” Semper explained that “they are traded by the natives of the Moluccas, the Philippines, New Guinea, but especially the islands of the Pacific Ocean.” From there, they are “traded for all kinds of exchange items, and then at some intermediate market for Chinese trade, Singapore, Batavia [Jakarta], or Manila, sold directly to the local Chinese.”<sup>28</sup> The topic was therefore not only attractive to zoologists, but also to Germans interested in opportunities for investment in these colonized territories.

Semper’s career had been founded on his work in two different Spanish colonies, facilitated in part by his wife. In 1869, he became Professor of Zoology at the University of Würzburg, where he was also appointed Director of the university’s zoological collections in the same year.<sup>29</sup> Also, in 1869, Semper published a natural history of the Philippines in the style of Humboldt, addressing the geology, botany, zoology, ethnography, and history of the archipelago and its inhabitants. No mention of Anna appeared in the study, although Semper partially revealed his dependency on those resident in the colony, dedicating the work to her brother, Moritz Herrmann, whom he described as the “active promoter of my scientific endeavors.”<sup>30</sup> The merchant had become the Prussian Consul to the Philippines, demonstrating another link between German science and colonialism.<sup>31</sup> The dedication also suggested that Anna played a similar role, promoting his scientific work, at least in part, even if he failed to acknowledge it. The full extent of her contributions to this particular study remains unclear.

In the same year as the publication of his natural history of the Philippines, Semper began correspondence with Rudolf Virchow, co-founder of the German Society for Anthropology, Ethnography, and Prehistory, and eventually became the Society’s first General Secretary, editing its newspaper, after the founding of the Society in 1870.<sup>32</sup> Anna also became

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<sup>28</sup> Semper 1868a, p. 172.

<sup>29</sup> Schuberg 1895, p. ix.

<sup>30</sup> Semper 1869. This note is a modified paragraph from my doctoral thesis – see Weston 2012, p. 45.

<sup>31</sup> Bacareza 1980, p. 44.

<sup>32</sup> Andree 1976, vol. 2, pp. 450–457; *Correspondenz-Blatt* 1870–1872.

a member of the Society, which hints at the possibility that she may have taken part in Semper's studies of Filipinos too, although we have no evidence of how.<sup>33</sup> As they traveled through the Philippines, they collected information and objects related to each of the areas Semper covered in his natural history, so it is likely that Anna performed this work as well.

In 1870, the Professor of Zoology published an album of snail species from the Spanish colony that again partially showed his wife's contributions. Semper described one type of snail that had been "collected by my wife," no longer referring to her by name, whether accidentally or intentionally. Four other species had also been "collected by my wife," he explained later in the work.<sup>34</sup> The two again collaborated on the illustrations in the book as well. Unlike the study of sea-cucumbers, however, Anna received no recognition for her work by reviewers. Had the novelty worn off?

#### 4. Legacies: German

Despite his important role in the formation of the German Society for Anthropology, Ethnography, and Prehistory, Semper soon abandoned anthropology and focused on zoological study.<sup>35</sup> Before his departure from the field, he published an account of his travels in the Palau Islands, which he had visited to help him recover from a potentially deadly bout of dysentery he had contracted in the Philippines.<sup>36</sup> Sem-

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<sup>33</sup> Besides Anna, the Würzburg branch of the Society included merely one more woman, a Frau Lutteroth. The Berlin, Freiburg, Leipzig, Munich, Vienna, Mainz, Heidelberg, and Elberfeld branches had none, but the Hamburg-Altona branch had two besides several other familiar names: M. Herrmann, G. Semper, W. Semper, J. C. Semper, J. Otto Semper, Manfr. Semper, and Mathilde Semper. In addition to Mathilde, Frau Elise Meyer was a member in the branch. Another woman, Frau Hofrätin Deichmann, was a member in Cologne and four women – Frau Dr. Crailsheim, Frau Marie Melber, Frau Elisabeth Schmid, and Frau Carl Sömmering – were members in Frankfurt, evidently a bastion of liberal sentiment as far as female inclusion in scientific societies was concerned – see *Correspondenz-Blatt* 1870, pp. 8, 14–15, 23–24, 34–37, 53 & 57.

<sup>34</sup> Semper 1870, pp. 87 & 92.

<sup>35</sup> *Correspondenz-Blatt* 1870, p. 4.

<sup>36</sup> Lara Wildenthal has analyzed women's roles in German imperialism during the period of formal colonization of overseas territories beginning in 1884. She shows that German women took part as nurses, similar to the work they performed later in the First World War. Wildenthal 2001. The case of Anna Semper illustrates an

per dedicated the book to Anna, writing of his “dear wife” in strongly domestic, if not sentimental or even Oedipal language: “Mothers love most the child who has caused them the greatest pains,” he began, referring ostensibly to the travel account, but unintentionally hinting at its author as well. “As such, I today place this book into your hands, my dear wife,” repeating the phrase.<sup>37</sup>

Because his journey to a second Spanish colony, this one east of the Philippines, had taken far longer than he had anticipated, due to problems with transportation, he now wished to apologize for it, even though it had taken place a decade previously. Readers of his book, Semper continued,

will realize what you have suffered for me, the person presumed dead [*Verschollenen*], across weeks and months in anxious expectation: I offer today such a progeny of woe to your love.<sup>38</sup>

The imagery raises the dramatic stakes of his travel account, but it also evokes the language of pregnancy, though it is not clear whether it was hers or his. It is possible that the dedication speaks to various types of absences related to his work as a professor and a scholar too that the zoologist felt compelled to apologize for.

Semper concluded the dedication in much the same vein.

This book is yours; if you consider it worthwhile, then it has fulfilled its purpose and with it also mine: to give joy to you as a substitute for all the sorrow that you had experienced at that time through me.<sup>39</sup>

He acknowledges Anna’s emotional support, which at least partially negates her work as a naturalist, though it inadvertently implies that a male scientist could not successfully perform his own work without

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instance in which a woman acted as a nurse for a scientist working in a colony, even if not one owned by Germany, and that her efforts were potentially lifesaving. Without her, it is possible that Carl Semper may not have lived to continue his studies in the Philippines and Palau.

<sup>37</sup> Semper 1873 [p. v].

<sup>38</sup> Semper 1873 [p. v].

<sup>39</sup> Semper 1873 [p. v].

a woman's labor as a caregiver. Compared to the dedication to Moritz Herrmann, his brother-in-law, in his natural history of the Philippines, it presented his wife in a secondary and inferior role.

Reference to Anna, though not by name, appeared fleetingly at the beginning of the narrative, as Semper described his contracting dysentery. He sent his Filipino servant to continue his journey and planned to meet him again later, before explaining that he was "cared for by faithful and loving hands," those of his future spouse, during his convalescence. Into her hands went his sickened body and in exchange, he put the book into her hands, as was noted in the dedication. It was as if her labor, caring for him, was traded for his, producing the scientific travel account, as a radical contrast despite the necessity of the former for supporting the latter. He then became depressed due to his immobility, before his "fiancée" brought him word that a doctor had recommended a trip to sea to help cure his dysentery and that she had found a ship for him on which to travel to the Palau Islands. She was portrayed not as much a partner but as a servant, similar to the Filipino, who was also described using the word "faithful" (*treuen*), capable of executing the master's wishes.<sup>40</sup>

Before Semper's departure, he wrote of his bride-to-be once more. Despite her help with arranging the journey to Palau, he explained that she "could not rid herself of a worrisome anxiety so soon before our separation." Semper then "consoled her" by comparing his expedition to "a holiday trip, something like a trip from Germany to Italy."<sup>41</sup> She did not appear in his account again until his return, as if signifying the need for a separation of male and female spheres. By associating her feelings about his journey to Palau with anxiety, Semper succeeded in portraying Anna as unfit for such work herself. At the end of the account, Semper depicted his reunion with Anna in less sentimental terms than the dedication, but still downplayed her work as a naturalist. Upon his return to Manila, he first met Moritz, whom he asked, "what is your—my Anna—doing?" the slip of his speech illustrated that a woman was imagined to be the possession of her family, father and brothers, before marriage, which then transferred her to a husband. Not surprisingly, the German merchant replied that Anna was "in my house," the domestic site to which she would return should

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<sup>40</sup> Semper 1873, pp. 3 & 4.

<sup>41</sup> Semper 1873, p. 5.

her fiancé have perished at sea or elsewhere. Moritz explained that she had wanted to join a search for him in the Pacific Ocean and that “it was very difficult to stop her.”<sup>42</sup> Nonetheless, Anna’s brother had indeed stopped her, she was in his house, and now Semper had returned, so she could be returned to him.

Following their reunion, the two traveled together in the Philippines, although Semper omitted a mention of their marriage, which had taken place shortly after his return from Palau. Such trifles might have distracted from him presenting himself in the book as a heroic scientific traveler and revealed that his activities were only possible because of the work performed by Anna, beginning with her nursing him back to health prior to his trip to the other Spanish colony, another key detail he chose to gloss in the account. Semper did relate that the two traveled in the Philippines and “occupied ourselves and our work,” although he failed to specify what their labor entailed. Instead of thinking of their separation during his time in Palau, he explained (my italics), “we thought of the rich results of *my* travels.”<sup>43</sup> The value of the scientific work, as Semper projected it in his book, derived from his efforts alone.

Anna appeared at the beginning of the work in the dedication and at the end emphasizing the couple’s mutual belief in the rewards to be reaped from Semper’s travels. Male labor created in the public sphere thus prevailed at the same time that female work was veiled, obscured, and relegated to a private, and therefore invisible sphere, despite its essential and integral function. These were the longest statements that Semper had made about his wife in his published writings and they were the last. Yet, Anna’s work continued to appear in the publications of other scholars.

Semper’s exit from anthropology was not lamented by scholars in Germany, who initially viewed his travel account on Palau as superficial in terms of understanding of Palauan culture. An anonymous reviewer from the *Mitteilungen aus Justus Perthes’ Geographischer Anstalt über wichtige neue Erforschungen*, the leading geography journal in Imperial Germany, rejected the work due to its “tireless verbosity” and remarked that “a factual or scientific classification is missing entirely.”<sup>44</sup> Complicating the situation, a Polish naturalist and ethnographer Jan Stanislaw Kubary

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<sup>42</sup> Semper 1873, p. 343.

<sup>43</sup> Semper 1873, p. 344.

<sup>44</sup> [Anonymous,] 1873, p. 197.

(1846–1896)<sup>45</sup> arrived in Palau as a collector for the Godeffroy Museum of Hamburg in 1871 and, like Semper, published a sketch of his time there in 1873.<sup>46</sup> Writing for the *Geographisches Jahrbuch* a different German geography journal, the anthropologist Georg Gerland characterized Kubary's study as one with "very rich information" and "excellent illustrations of the inhabitants" of Palau, while a brief anonymous note in the *Archiv für Anthropologie*, official journal of the German Society for Anthropology, Ethnography, and Prehistory, noted that it "includes highly interesting information about the inhabitants of Palau which frequently broaden and elaborate Semper's."<sup>47</sup> The German historian Heinrich Rückert, reviewer for *Blätter für literarische Unterhaltung*, a literary magazine in Germany, recognized Semper's work more for its fictional than scholarly features, dubbing it a "novel."<sup>48</sup>

Fascinatingly, Georg Semper, Carl's brother, published a study of butterflies from the Caroline Islands in the same journal volume in which Kubary's study appeared in 1873. It included illustrations created by both the author's sister-in-law as well as Kubary. Furthermore, the author wrote about one butterfly species that

I thought I could conclude from the notes of Anna Semper that the light green pupae on [the Philippine Island of] Bohol give the female's tailed form, while Kubary's notes of [the Caroline Island of] Yap are just the opposite.<sup>49</sup>

Georg Semper's remarks not only place Anna and Kubary on an equal plane but indicate that she produced notes involving her natural historical work.

Evidence of Anna Semper's contributions then fell dark for the following ten years. Despite his spouse's aptitude in various scientific arenas, no reference to her work appeared in publications by Semper in the years that followed. Over the next decade between 1873 and 1883, he produced forty-eight zoological works in German, English, and French, including two monographs disputing the work of Ernst

<sup>45</sup> Cf. *Wikipedia* [2020c](#); [2020d](#); [2020e](#).

<sup>46</sup> Wuerch, Anthony 1994, p. 63; Kubary 1873.

<sup>47</sup> Gerland 1874, pp. 393 & 394; Verzeichniss 1874, p. 54.

<sup>48</sup> Rückert 1873, p. 707.

<sup>49</sup> G. Semper 1873, p. 131.

Haeckel, the foremost popularizer of Darwinism in Germany.<sup>50</sup> In one study, Semper discussed ideas about male and female behavior generally in an anecdote he related about two prairie dogs he kept at the Zoological Institute in Würzburg. The female, Grete, “in every respect an ornament of her gender,” was “always gentle, humble, and tender, but also shy.” The male, on the other hand, Hans, was “violent and mistrustful,” and, as it turned out, “a real domestic bully toward his female [*ein echter Haustyrann seinem Weibchen*].”<sup>51</sup>

Notwithstanding the decade-long interruption, whether the consequence of conduct similar to the prairie dog Hans or otherwise, traces of Anna’s scientific contributions eventually resurfaced. In 1883, the zoologist Emil Selenka published a study of *Sipunculida*, a type of marine worm, that drew on Semper’s collections from the Philippines. The work was the fourth volume of a series that had begun with Semper’s study of sea-cucumbers, showing that his travels in the Spanish colony were so extensive that other scholars could make use of his specimens, even though they had been amassed more than a decade previously. Among the “beautiful drawings” Selenka included in the study, were seven created by Anna Semper.<sup>52</sup>

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<sup>50</sup> Schuberg 1895, pp. xx–xxii; Semper 1876; 1877; Kelly 1981. In his travel account of Palau, Semper blasted Haeckel’s portrayal of Melanesians (Semper 1873, p. 363, n.). In her history of biology in nineteenth-century German universities, Nyhart writes that Semper shared Haeckel’s “penchant for polemics” and that the zoologist disputed with a fellow professor at the University of Würzburg, Albert von Kölliker, over the comparative anatomy collection at the school, a conflict that continued from 1870 to 1892, when Semper was forced to retire due to failing health (Nyhart 1995, pp. 231–232 & 308).

<sup>51</sup> Semper 1880, p. 76. The word he used for female, *Weibchen*, can also mean young female, mate, bitch, hen, little woman, or dumb female.

<sup>52</sup> Selenka 1883. Soon after Imperial Germany became a colonial power in 1884 by establishing protectorates in Africa and the Pacific Islands in Togo, Cameroon, Tanzania, Namibia, and New Guinea, Carl Semper’s scientific knowledge of Palau emerged once more amid Germans’ interest in obtaining the Caroline Islands, despite the initial rejection of his work. In 1885, German naval vessels raised the Imperial flag to lay claim to as many of the islands in the Carolines as possible before Spain could follow suit (Knoll, Hiery (eds.) 2010; Smith 1978; Hezel 1995).

During the crisis, a pro-colonial newspaper in Germany reported that Semper had delivered a “very instructive lecture” on the Caroline Islands before the Würzburg branch of the Colonial Association. The article related the naturalist’s suggestions that the German acquisition of the islands would be “no prosperous holding” and that



In 1886, Carl's brother Georg published a comprehensive study of butterflies in the Philippines, a work which comprised the fifth volume of the zoologist's series on fauna from the Spanish colony. As he had more than ten years earlier, Georg Semper again drew on the work of Anna Semper. Describing several scholars whose collections he had examined, the author wrote of his sister-in-law that

Mrs. Anna Semper also drew caterpillars and wrote observations during her stay on Luzon and later on Bohol.<sup>53</sup>

He included illustrations by her and cited her notes.<sup>54</sup> Anna Semper's legacy as far as studies of species from the Philippines was concerned was significant and extended for several years beyond her travels through the Spanish colony with her husband. In 1887, however, Carl Semper suffered a stroke from which he never fully recovered.<sup>55</sup>

A study of butterflies from South Asia published in India in 1890 by the English entomologist Lionel de Nicéville, cited Anna Semper's work once again, but her attention may have been frequently occupied by her husband's health.<sup>56</sup> He ultimately passed away in 1893 and obituaries of the zoologist offered only scant credit to his wife's contributions to his scientific work. One newspaper reported in 1893 that Anna "accompanied him on a scientific journey" and had painted some of the "splendidly beautiful" illustrations in Semper's works.<sup>57</sup> In an extensive eulogy published in the same year in the German scientific journal, *Sitzungsberichte*

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the "claim of the Spanish to these is justified by nothing." It noted finally Semper's calculation that the "value of the total island area for export products" was at most 200,000 marks annually. The naturalist Kubary also supported Germany's imperialist aggression working as a translator aboard a German warship in the Caroline Islands leading up to and during the crisis. After Spain disputed Germany's bid for the Carolines, Pope Leo XIII eventually arbitrated the matter and decided in favor of Spanish possession in late 1885 yet upheld the German right to commercial and naval access to the islands (*Deutscher Kolonialverein* 1885, p. 757; Paszkowski 1971, p. 58; Hezel 1983; Olivart 1899, pp. 17–24). This note is a modified paragraph from my doctoral thesis – see Weston [2012](#), pp. 216–217.

<sup>53</sup> G. Semper 1886, p. 1.

<sup>54</sup> G. Semper 1886, pp. 11 & 133.

<sup>55</sup> Schuberg 1895, p. vii.

<sup>56</sup> Nicéville 1890, p. 411, n.

<sup>57</sup> Rarsball [1893](#), p. 651.

*der Physikalisch-Medizinischen Gesellschaft zu Würzburg*, the zoologist August Schuberg related that after Semper had fallen ill in the Philippines “he found a loving nurse in his bride, Anna Herrmann.”<sup>58</sup> Besides mentioning her nursing him during his sickness, the author explained that she traveled with Semper, he but did not describe any specific scientific work by her. Yet, even after Carl’s death, references to her illustrations appeared in Rudolf Ritter von Stummer-Traunfels’ study of marine flatworms in 1895 in the *Zeitschrift für wissenschaftliche Zoologie*, a German zoology journal.<sup>59</sup>

## 5. Conclusions

Despite its initial rejection by reviewers, Carl Semper’s travel narrative of Palau became one of his most important legacies due to the eventual presence of German imperialism there.<sup>60</sup> Anna was not only featured in the book in its dedication, nursing care for Carl, and in their reunion following his return from the islands, but she now seemed to be promoting its circulation in the aftermath of Imperial Germany’s acquisition of Palau. A review of the work appeared in the *Deutsche Kolonialzeitung*, a German colonial newspaper in 1899 and the first appendix to the book was published as an article in the *Koloniale Zeitung*, a different colonial newspaper in 1903.<sup>61</sup> In 1905, the *Deutsches Kolonialblatt*, yet another colonial newspaper, reported that Anna had sent a “shotgun with accessories” to a Palauan named Arakalulk, who was Semper’s travel companion during his time in Palau.<sup>62</sup> If she sought to bring renewed

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<sup>58</sup> Schuberg 1893, p. 114.

<sup>59</sup> Ritter von Stummer-Traunfels 1895, p. 724.

<sup>60</sup> In the late 1890s, Imperial Germany again moved to expand its colonial holdings, obtaining the concession of Qingdao on the Shandong Peninsula in 1897 from the Qing Dynasty of Imperial China and beginning secret negotiations with Spain following the 1898 Spanish-American War. In February of the following year, Imperial Germany purchased the Caroline, Mariana, and Palau Islands from its former rival and by the end of 1899 began the creation of a protectorate over part of Samoa – cf. Knoll, Hiery (eds.) 2010, pp. 51–59. This note is a modified paragraph from my doctoral thesis – see Weston 2012, p. 220.

<sup>61</sup> Kirchoff 1899, p. 341; Semper 1903.

<sup>62</sup> Senfft 1905, p. 49. The same colonial official discussed Semper in other reports from Palau – Senfft 1902; 1907a; 1907b.

attention to her husband's study of the islands and its inhabitants, this gesture was surely bound to make noise.

Although Anna's promotion of her husband's work after his death was unusual, if not exceptional, as far as women's roles in early twentieth-century Imperial Germany were concerned, the saga of her husband's trip to Palau appeared once more in print in 1905 as a children's book adapted from his original account. Written by a woman, Veronika Schultz, the author thanked Mrs. Semper and the original publisher for allowing her to make use of Carl's 1873 travel account, showing that Anna had some domain over her late husband's work. This version reinforced middle-class male and female roles with Semper working to become a naturalist and Anna merely becoming his spouse. Their travels through the Philippines that followed his return from Palau did not appear in the book, though the author included an afterword that noted Anna's gift of "rifle and ammunition" to Carl's Palauan companion as well as the remark, likely from Anna herself, that Semper "would have been glad, if he had still lived, to see that Palau now belongs to his people."<sup>63</sup> As much as the social norms of industrial Germany bound women into domestic spaces, Anna Semper did not remain completely confined by them. She contributed to the rise of the German colonial science, which ultimately underpinned German imperialism.

Before she passed away in 1909, Anna attended a lecture by Augustin Krämer in 1908 about his visit to Palau.<sup>64</sup> Although there is no evidence that her work influenced later women's scientific activities, Elisabeth Krämer-Bannow traveled and worked alongside her husband Augustin during his trip to Palau and elsewhere in the Pacific Islands.<sup>65</sup> Elisabeth not only contributed extensively to her husband's studies, but also published her own book.<sup>66</sup>

The landscape for the production of science by women had expanded by the early twentieth century, particularly with Imperial Germany's acquisition of colonies. The case of Anna Semper points out that women played important, even if subordinated, roles in the creation of German colonial science even before this time. Although looking

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<sup>63</sup> Schultz 1905, p. 220.

<sup>64</sup> Krämer 1917, p. 137, n. 2.

<sup>65</sup> Krämer 1917.

<sup>66</sup> Krämer-Bannow 1916.

at the publications of Carl Semper and other male scholars offers only fragmentary evidence of Anna's scientific contributions, the fact that numerous traces exist underscores the very real presence of her work within the studies of others.

This method might be fruitfully explored on a greater scale in the future by inquiring into the "domestic lives," where possible, of scientists in nineteenth-century Germany and elsewhere. This approach can also potentially offer greater insight into German women's activities in colonial contexts.

## 6. Acknowledgments

The author wishes to thank Jan Surman, Michal Kokowski, Stephanie A. Laine, Elizabeth Whitley, Sharon Reitman, and the anonymous reviewers from *Studia Historiae Scientiarum* for their constructive criticism of earlier versions of this article. All errors of interpretation belong to me alone.

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