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INSECT LIFE AND LETTERS: THE STUDIES OF HANNS HEINZ EWERS AND OTTO AND ROSE HECHT

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ABSTRACT

This article argues that vast histories of war and displacement in the twentieth century are connected to the small and almost unnoticeable lives of insects, and that philology has much to gain from paying attention to insect worlds. We examine two case studies: the work of the German entomologist Otto Hecht and his wife, Rose Caro Hecht, and the lay entomology of the German writer Hanns Heinz Ewers and his letter exchange with geneticist Richard B. Goldschmidt. Drawing on the cultural-theoretical work of Walter Benjamin, our analysis sheds light on the entanglement of entomological and philological labour and a recurrent interplay of intimacy and violence in both. We develop an approach which takes seriously the eros of intellectual pursuits and the endless curiosity that drives the study of words and insects, but which also shows how these encounters with the very small intersect with incomprehensibly large-scale political violence in the twentieth century. We playfully suggest that the method we develop in this article constitutes a form of 'insect philology'.

Der Artikel argumentiert, dass die größeren geschichtlichen Entwicklungen von Krieg und Vertreibung im zwanzigsten Jahrhundert mit den kleinen und kaum wahrnehmbaren Leben von Insekten zusammenhängen, und dass die Philologie von einem aufmerksamen Blick auf die Insektenwelt bereichert werden kann. Die Autorinnnen betrachten zwei Fallstudien: die wissenschaftliche Arbeit Otto Hechts und seiner Frau Rose Caro Hecht sowie Hanns Heinz Ewers' Laienentomologie und seinen Briefwechsel mit dem Genetiker Richard B. Goldschmidt. Gestützt auf die kulturtheoretische Arbeits Walter Benjamins, beleuchtet unsere Analyse die Verflechtung entomologischer und philologischer Arbeit und deren Zusammenspiel von Intimität und Gewalt. Wir entwickeln einen Ansatz, der den Eros intellektueller Arbeit sowie die endlose Neugier, die die Erforschung von Sprache und Insekten beflügelt, ernst nimmt. Gleichzeitig zeigen wir, auf welche Art diese Begegnungen im Kleinen mit der unverständlich großen politischen Gewalt des 20. Jahrhunderts verschränkt sind. Wir schlagen spielerisch vor, dass die Methode, die wir in diesem Artikel entwickeln, eine Art „Insektenphilologie'' einfordert.

INTRODUCTION

This article moves across scales, to dizzying effect: from the macro-history of war and genocide in the twentieth century, to the micro-history of ant societies; from the extinction of insects by pesticides, to the eyes of a

Mexican grasshopper; from the fate of a young family whose lives were upended after the Nazis came to power, to the exchange of humorous postcards between male friends; from ecological descriptions of insect habitat, to the frustrations and desires of the lone scholar; from discussions of fascism, complicity and agency, to the pinning down of a singular butterfly in Berlin around 1900. Prepare to be disorientated.[1]

In the list above, we have purposefully moved from the very large to the almost unnoticeably small. As we argue in this article, the macro-histories of war and displacement in the twentieth century are connected to the small and almost unnoticeable lives of insects, and our philology has much to gain from paying attention to insect worlds. Historically, insects have been rigorously taxonomised and their dead bodies displayed so that human actors can study them in perpetuity. Insect taxidermy flourished from the late seventeenth century onwards, with specially designed nets and pins which became standard parts of the natural historian's apparatus. Later, in the eighteenth and nineteenth centuries, entomologists developed the glassed-in vivarium for the study of insect behaviour in living colonies.[2] Perhaps it is unsurprising, given the place of insect collections within the tradition of the *Wunderkammer* and the natural history museum, that from the eighteenth century onwards, poetry records insect/human encounters and the human affects of wonder and curiosity that these encounters provoke. This lyric tradition is, in the German context, often discussed in connection with Barthold Heinrich Brockes's *Irdisches Vergnügen in Gott* (1721–1748). This poetry was by no means rigorously separate from texts in natural history and natural philosophy; in fact, 'Linnean poetry' was often found in European textbooks of plant and animal life. From the second half of the nineteenth century, the popular book series *Brehms Tierleben* and, somewhat later, Edmund Reitter's *Fauna germanica* (1908–1916) reproduced on the page, in colourful plates, the tidy rows of insects which were found in natural history collections. Through these series, which aimed to provide zoological knowledge to children and families, scientific literature claimed a place in the private library, and suggested the naturalness of a German *Tierreich* within an expanding German *Reich*.[3]

[1] The authors would like to thank the special issue editors as well as journal editors for their careful peer review. We are also grateful to the University of Exeter's Animals and Environment Reading Group for their careful reading of and feedback on an earlier version of this article. Alice Christensen would also like to thank Anita Hecht and Ilse Hecht for sharing their family archives and for their warm hospitality in August 2024.

[2] *Naturalists in the Field: Collecting, Recording and Preserving the Natural World from the Fifteenth to the Twenty-First Century*, ed. by Arthur MacGregor (Brill, 2018); Diogo de Carvalho Cabral and Frederico Freitas, 'Placing Insects in Histories of Science', *Isis*, 115.1 (2024), pp. 136–40, doi:10.1086/728894.

[3] *Brehms Tierleben* was originally published as a six-volume series in the 1860s. Reprinted numerous times and translated into several languages, it became a standard reference work for the European bourgeois home. Edmund Reitter, *Fauna germanica*, 5 vols (K. G. Lutz, 1912), IV, *Die Käfer des deutschen Reiches*; *Brehms Tierleben. Allgemeine Kunde des Tierreichs*, ed. by Eduard Pechuel-Loesche, 10 vols (Bibliographisches Institut, 1892), IX, *Insekten*.

By the start of the twentieth century, the study of insects had developed into a specialised science with broad popular interest. Insect collecting was a common pastime, and specimens could be identified using the reference volumes by Brehm, Reitter and their co-authors. Entomology was gaining increasing prominence within zoology, particularly 'applied' or 'economic' entomology, which promised to increase crop yields and diminish the burden of infectious disease through the use of chemical insecticides.

Imaginative literature about insects was nothing new when Franz Kafka and his contemporaries took up this living material. In Modernist literature we find the continuation of a tradition of German writing about insects that might have its beginning in the Baroque period, but we also find a number of the preoccupations of contemporaneous entomology, such as the frequent comparison of insect and human societies and the attempt to control 'Schädlinge'. The designation of certain animals as 'Schädlinge', harmful either to agriculture or to human health, lent itself to co-optation in the political and social sphere as a metaphor for living beings who supposedly posed an active threat to the health of the larger community. The fear of 'Schädlinge' is reflected in experiments in literary perspective that recognise eugenicist thinking and, in some cases, turns it on its head (or on its back), exemplified most famously by Gregor Samsa's transformation into an 'ungeheuere[s] Ungeziefer' in Franz Kafka's 'Die Verwandlung'. Sarah Jansen has shown that the modern term 'Schädlinge' absorbed the semantic field previously covered by the pre-modern 'Ungeziefer'.[4]

The popular pastime of collecting and taxonomising appears in literature of this period too. The terrain of Walter Benjamin's 'Schmetterlingsjagd' teems with sought-after insects, in this case butterflies. In the collection of texts intended for *Berliner Kindheit um Neunzehnhundert*, Benjamin describes an idealised form of devout attention in the pursuit of knowledge, an attention so focused that it is transformative.[5] The image of insect observation serves as an analogy for intellectual and, in Benjamin's case, philological labour. The 'heiße Jagden' of Benjamin's childhood summers in Brauhausberg are permeated with a desire to be led astray 'von den gepflegten Gartenwegen fort in eine Wildnis'.[6] As the boy follows the butterflies' movements from flower to flower, holding his net ready, the

[4] Sarah Jansen, *Schädlinge. Geschichte eines wissenschaftlichen und politischen Konstrukts, 1840–1920* (Campus, 2003); Elizabeth Boa, 'Creepy Crawlies: Gilman's "The Yellow Wallpaper" and Kafka's "The Metamorphosis"', *Paragraph*, 13.1 (1990), pp. 19–29; Peter Arnds, 'On the Language of Abjection in Kafka's "Die Verwandlung"', *Metacritic*, 2.2 (2016), pp. 19–34. On insects and eugenicist logics in Modernist literature, see David Hollingshead, 'Domestic Ecology and Autoimmunity: Eugenic Feminism in the Sixth Extinction', *Modernism/modernity Print Plus*, 7.2 (2022), doi:10.26597/mod.0236.

[5] Walter Benjamin, *Berliner Kindheit um Neunzehnhundert*, in *Gesammelte Schriften*, 7 vols (Suhrkamp, 1991), IV.1, pp. 244–45.

[6] Ibid., p. 244.

relation between human and animal becomes ever more intimate and entangled: 'je mehr ich selbst in allen Fibern mich dem Tier anschmiegte, je falterhafter ich im Innern wurde, desto mehr nahm dieser Schmetterling in Tun und Lassen die Farbe menschlicher Entschließung an'.[7] But the boy's hunt is also an ambivalent pursuit. Desire takes on violent overtones, since the boy certainly does not stop from seizing the butterfly. Exhausted, the boy traps the bug in his net, carrying it back home to prepare his specimen with 'Äther, Watte, Nadeln mit bunten Köpfen und Pinzetten'.[8] Beyond the successful capture of the specimen, and the escape back to a more usual state of mind, there is a further reward of the boy's careful attention: 'einige Gesetze' of that 'Sprache, in welcher dieser Falter und die Blüten vor seinen Augen sich verständigt hatten'.[9] From the moment of felt communion and heightened perception, a kind of anticlimax ensues for the boy in the form of scientific knowledge.

In this article, we examine two case studies that illuminate the entanglement of entomological and philological labour, and its interplay of intimacy and violence — an entanglement that is represented in Benjamin's 'Schmetterlingsjagd' and the longer history of the German cultural preoccupation with insects. In the first section, Alice Christensen explores the work of the German entomologist Otto Hecht and his wife, Rose Caro Hecht. In the second section, Ina Linge explores the lay entomology of the German writer Hanns Heinz Ewers and his letter exchange with geneticist Richard B. Goldschmidt. The Hechts and Ewers are not to be found at the centre of a history of twentieth-century entomology. Like the insects they study, their contributions to entomology are rarely acknowledged. Otto Hecht's story is partly one of a thwarted research career, a voice silenced after 1933, his promising zoological research abandoned.[10] Ewers's writing offers an entertaining but in no sense field-defining contribution to entomology, which is tinged with nationalistic ideas about what it means to produce a German text.

We believe that German Studies has much to continue to learn from environmental humanities and interdisciplinary conversations about our entangled ecologies, which cross the boundaries of the humanities and social and natural sciences. In this article, we explore the enduring ties between entomology and writing, between biology and philology, and we playfully suggest that the work presented in this article constitutes a form of 'insect philology'.[11] To guide our own reading practice, we expand

[7] Ibid.

[8] Ibid.

[9] Ibid., p. 245.

[10] Much more than Hecht, it is undoubtedly his erstwhile mentor Erich Martini, a committed and unrepentant Nazi, who figures in the history of international scientific networks of insect-transmitted infectious disease.

[11] Daniel Burton-Rose has suggested the term 'insect humanities' to describe the distinct interdisciplinary field within Animal Studies which deals with human–insect encounters. Daniel

Benjamin's memory-image of pinning down knowledge, which vacillates between intimacy and violence, by appending a contrasting image, one which does not violate the object of attention. In her memoir (like Benjamin's, unpublished at the time of her death), philosopher Gillian Rose writes that critical thinking must entail 'infinite intellectual eros: endless curiosity about everything', as well as 'the ability to pay attention: to be rapt by what is in front of you without seizing it yourself, the care of concentration — in the way you might look closely, without touching, at the green lacewing fly, overwintering silently on the kitchen wall'.[12] In this understanding of intellectual labour, we are strikingly close to an (anti-)definition of philology given by Werner Hamacher in his aphoristic '95 Theses on Philology', in which he suggests that philology may be 'the movement of attending to that which offers itself to this attending and which slips away from it, encounters or misses it, attracts it, and, attracting it, withdraws from it'.[13] This paper is an attempt to 're-wild' our practices and to embrace this work at every scale: insects and words, attention and collaboration — and all, too, as integral parts of a much larger history of inter- and intraspecies intimacy and violence.

TAXONOMIC LANDSCAPES: OTTO HECHT AND ROSE CARO HECHT

German entomologist Otto Hecht (1900–1973) arrived at the Hamburger Institut für Schiffs- und Tropenkrankheiten in 1927, at age 27.[14] The Institute had been founded in 1900, in the wake of the 1892 cholera epidemic in Hamburg.[15] Among the eight departments which comprised

Burton-Rose, 'Towards a Sinophone Insect Humanities: A Review Essay', *Journal of the History of Biology*, 53.4 (2020), pp. 667–78, doi:10.1007/s10739-020-09624-3. Cabral and Freitas argue in a 2024 special issue of the journal *Isis* that insects have historically challenged and co-shaped human knowledge 'through their own practices of knowing and world-making', in Cabral and Freitas, 'Placing Insects in Histories of Science', p. 139. In 2023, a conference on 'Insektenpoesie: Grundzüge einer literarischen Entomologie' organised by Davide Giuriato and Anatol Heller was held at the Universität Zurich. Several books have addressed metaphors and literary lives of insects. See, for example, Rachel Murray, *The Modernist Exoskeleton: Insects, War, Literary Form* (Edinburgh University Press, 2020), doi:10.1515/9781474458214; Insect *Poetics*, ed. by Eric C. Brown (University of Minnesota Press, 2006); Cristopher Hollingsworth, *Poetics of the Hive: Insect Metaphor in Literature* (University of Iowa Press, 2001); and Steven Connor, *Fly* (Reaktion, 2006).

[12] Gillian Rose, *Paradiso* (Menard, 1999), p. 46.

[13] Werner Hamacher, trans. by Catharine Diehl, '95 Theses on Philology', *Diacritics*, 39.1 (2009), pp. 25–44 (p. 28). Incidentally, a beetle also appears in this text, in a letter from Sigmund Freud to Wilhelm Fliess, in which a patient 'suffered an attack of anxiety at the age of ten years when he attempted to capture a black beetle, which did not allow it to happen' (p. 38). According to Freud, the supposed meaning of the beetle was in the boy's relationship to a French governess (Käfer becomes 'que faire?'). Hamacher reads Freud's case study as a philological exercise, as a displacement and repetition in language.

[14] Horst Kalthoff, *'Ich war Demokrat und Pazifist'. Das Leben des deutsch-jüdischen Bürgers Otto Hecht (1900–1973) und das Schicksal seiner Angehörigen* (Donat, 2005).

[15] Das Hamburger Institut für Schiffs- und Tropenkrankheiten was the third such institution to be founded, just after the London and Liverpool Institutes of Tropical Medicine in 1899. Like

the Institute was Medical Entomology,[16] where Hecht conducted research on the behaviour of mosquitoes (*Culicidae*), as well as on insect bites. In his six years at the Institute, Hecht came to work closely with the head of the division of Medical Entomology, the internationally prominent infectious disease specialist Erich Martini. Hecht had completed a doctorate in zoology in Munich a few years earlier with a thesis on carpenter ants (*Camponotus ligniperda*) and had worked in the interim in agricultural research and the pesticide industry.[17] The position in Hamburg was his first within a research institute, and Hecht planned to collate his research findings in a monograph that would serve as his Habilitation.[18] From the time of its inception, much of the Institute's work focused on the prevention and treatment of malaria, an illness transmitted by the *Anopheles* genus of mosquitoes.[19] Hecht's own research contribution dealt with the sensory apparatus of mosquitoes, as indicated by their preferences for one place over another, and his writings express curiosity about the 'Umwelten' (the sensory worlds) of insects. In its focus on sensory worlds, Hecht's work contains similarities to the contemporaneous work of zoologist-philosopher Johann Jakob von Uexküll, who developed the concept of 'Umwelt' for thinking about animal perception, the sensory worlds they inhabit ('Merkwelt'), and their agentic spaces ('Wirkwelt').[20] Nevertheless, the practical aim of Hecht's research, and of all the Institute's research in this area, was to find ways to better control, and ultimately eradicate, insect populations.

Hecht's first published report on this research appeared in the major international malaria journal *Rivista di Malariologia* in 1930. It opens

other research institutions of its kind in Europe, it was a major organ of international scientific cooperation, with a particular set of intellectual and financial interests in German and European colonial expansion. See Jürgen Zimmerer and Kim Sebastian Todzi, *Hamburg. Tor zur kolonialen Welt. Erinnerungsorte der (post-)kolonialen Globalisierung* (Wallstein, 2021); Bernhard Fleischer, 'A Century of Research in Tropical Medicine in Hamburg: The Early History and Present State of the Bernhard Nocht Institute', *Tropical Medicine and International Health*, 5.10 (2001), pp. 747–51; and Sven Tode with Kathrin Kompisch, *Forschen — Heilen — Lehren: 100 Jahre Hamburger Tropeninstitut* (Bernhard-Nocht-Institut für Tropenmedizin, 2000).

[16] Tode and Kompisch, *Forschen – Heilen – Lehren*, p. 12.

[17] Otto Hecht, 'Embryonalentwicklung und Symbiose bei *Camponotus ligniperda*', *Zeitschrift für Wissenschaftliche Zoologie*, 122 (1924), pp. 173–204.

[18] From an unpublished memoir by Paul Hecht, Otto's older brother, p. 4, provided to the author by Anita and Ilse Hecht.

[19] On the central role of malaria in the history of empire, and the human and non-human actor networks that materialised, see Rohan Deb Roy, *Malarial Subjects: Empire, Medicine and Non-Humans in British India, 1820–1909* (Cambridge University Press, 2017); John Robert McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620–1914* (Cambridge University Press, 2010).

[20] Uexküll held senior positions at the Universität Hamburg from 1924 onwards, and it is possible that the two men crossed paths. The 'Umwelt' concept developed in his book *Umwelt und Innenwelt der Tiere*, first published in 1909 and then in a second, significantly expanded edition in 1921. Johann Jakob von Uexküll, *Umwelt und Innenwelt der Tiere* (J. Springer, 1909/1921). See also Johann Jakob von Uexküll and Georg Kriszat, *Streifzüge durch die Umwelten von Tieren und Menschen. Ein Bilderbuch unsichtbarer Welten* (J. Springer, 1934).

with a European woodland scene, evoking the 'Tümpel, Bachbette, Baumhöhlen, Blattachseln, reines Wasser oder Wasser reich an sich zersetzender organischer Materie u.s.w.' where various mosquitoes may be discovered.[21] Hecht writes that there are very obvious differences between various biotopes, but there are also more subtle differences which deserve our attention.[22] We find in this passage the names of a whole host of mosquitoes of the *Aedes* and *Anopheles* genera: *Aedes nemorosus*, *Aedes cantans*, *Aedes excrucians*, *Aedes variegatus*, *Anopheles maculipennis*, and *Anopheles bifurcatus*. We read across a landscape in which species' names pile up to dizzying effect:

> *Aedes nemorosus* besiedelt Pfützen im vollen Waldesschatten, *cantans* ist mehr eine Form des lichteren Waldes oder des Waldrandes, noch weniger Schatten liebt *excrucians*, der aber gern noch in etwas buschigem Gelände vorkommt, während *variegatus* mehr eine Form des ganz offenen Geländes ist. Die Verteilung dieser Arten auf die verschiedenen Brutplatztypen ist aber, wie mir Herr Professor Martini auf Grund seiner Jahre langen Erfahrungen erzählen konnte, keine ganz strenge, *nemorosus* und *cantans* sind häufig vergesellschaftet, auch *cantans* und *excrucians* und wiederum *excrucians* und *variegatus*. Aber nie dürfte etwa *variegatus* und *nemorosus* im demselben Tümpel zu finden sein. Wir sehen also hier, wie die verschiedenen Belichtungs- und Besonnungsverhältnisse die verschienenen Entwicklungsplätze charakterisieren. In ähnlicher Weise kommt *Anopheles maculipennis* in ziemlich offen liegenden Gräben vor, während *bifurcatus* mehr eine Form des Halbschattens ist.[23]

Hecht was a keen hiker,[24] but he is not recollecting his own literal walk here, across dusky woodland and into sun-dappled clearing, although his sentences build to something very much like the traversal of a landscape. He is instead describing the fine but crucial distinctions between biotopes. Yet the effect of this description on the reader is one of moving hastily across an expanse of woodland towards a clearing. Parataxis heightens this effect, with commas like momentary pauses in a breathless chase, which then slow down in hypotactic specification ('*excrucians*, der aber gern noch in etwas buschigem Gelände vorkommt, während *variegatus* mehr eine Form des ganz offenen Geländes ist'). Like Benjamin's child on the hunt, the scientist dashes from shade to bush to clearing. Benjamin's

[21] Otto Hecht, 'Über den Wärmesinn der Stechmücken bei der Eiablage,' *Rivista di Malariologia*, 9.9 (1930), pp. 706–24.

[22] The term 'biotope', which refers to a habitat that supports a specific configuration of multiple species of plants and animals, was introduced by the German zoologist Friedrich Dahl. See Kurt Jax, '"Organismic" Positions in Early German-speaking Ecology and Its (Almost) Forgotten Dissidents', *History and Philosophy of the Life Sciences*, 42.44 (2020), pp. 1–31; and Friedrich Dahl, 'Grundsätze und Grundbegriffe der biocönotischen Forschung', *Zoologischer Anzeiger*, 33 (1908), pp. 349–53.

[23] Hecht, 'Über den Wärmesinn', p. 707.

[24] Otto and Rose Hecht's son Rudolph mentions this in an unpublished oral history completed in 1995. Provided to Alice Christensen by Anita Hecht, daughter of Rudolph and Ilse Hecht.

text, too, is strewn with the names of the butterflies he collects, in his case the common German names: Kohlweißlinge, Zitronenfalter, [Kleiner] Fuchs, Ligusterschwärmer, Trauermäntel, Admirale, Tagpfauenaugen, Aurorafalter.[25] For both Hecht and Benjamin, in their respective texts, the eros of the hunt becomes the eros of the train of thought, unfolding systematically and disclosing the excitement and satisfaction of knowledge itself. In Hecht's case, this produces a landscape of quasi-mathematical taxonomic orderliness, rather unlike the trampled grass of Benjamin's 'Schmetterlingsjagd'.

Between his discussion of the preferred breeding places of the *Aedes* genus and those of the *Anopheles* genus, Hecht briefly interrupts his scene. He does this to include some observations about the overlapping of species. *Aedes* species are often 'vergesellschaftet', Hecht writes, meaning that they are often found in various species combinations. Other mosquito types are never found in the same location, however. In the language of entomology, the analogy to human society seems unavoidable, although Hecht's research never overtly centred on comparisons between insect and human societies ('Gesellschaften'). Elsewhere, in a 1932 article, he describes the overwintering habits of 'unsere einheimischen Stechmücken',[26] with the adjective 'einheimisch' conveying a strong sense of belonging. These are our ('unsere') mosquitoes, which belong to the wild places in a shared 'Heimat'. Indeed, the actual mosquitoes used in the experiments were possessions of the Hamburg Institute, and therefore, as laboratory animals, occupied a strange position: both wild and domesticated, native and (in the case of certain species) exotic, cared for by Hecht and his colleagues.[27] In Hecht's use of terms like 'vergesellschaftet' and 'einheimisch', we find obvious examples of ideas of human belonging transferred to the insect realm.

Hecht's 1930 paper asks how mosquitoes select particular bodies of water in which to lay their eggs. While researchers had previously studied mosquito larval development in different environments, Hecht argues, one could consider the question from the perspective of the parent, rather than that of the offspring. Instead of studying which larvae survive under varying conditions, one could consider the sensory physiology of the mother mosquito who selects a place to alight:

[25] Benjamin, 'Berliner Kindheit', pp. 244–45. The German butterfly names Benjamin mentions point towards other worldly things: lemons, foxes, hedges, peacocks, mourning cloaks and admirals. Language indexes the world's collections and at the same time indicates itself, as well as its reference to a category of insect life.

[26] Otto Hecht, 'Experimentelle Beiträge zur Biologie der Stechmücken II', *Zeitschrift für angewandte Entomologie*, 19.4 (1932), pp. 579–607.

[27] In his 1932 paper (ibid.), Hecht describes feeding practices in detail, which included other laboratory animals such as guinea pigs and parrots.

> Andererseits entsteht ein Komplex sinnesphysiologischer Fragen. Es ist wohl nicht gut vorstellbar, dass die Mücken ihre Eier meist wahllos auf jede Wasser- bzw. Bodenfläche absetzen, gleichgültig, ob ihre Nachkommenschaft dort gut gedeihen kann, oder ob sie dort teilweise zugrunde gehen muss. Grob anthropomorph gesprochen tritt also die Frage auf: Wie erhält die Mücke, die ihre Eier absetzen will, einigermaßen Kenntnis von der speziellen Eignung eines Gewässers oder einer Bodensenke?[28]

Hecht proposes that it can be assumed that insects, like humans, search out the safest place possible to reproduce. It cannot be all the same to these creatures, Hecht reasons, whether their offspring flourishes or perishes. Hecht acknowledges that he is speaking anthropomorphically in posing this research question. To better understand where mosquitoes prefer to reproduce, he imagines another creature's 'Umwelt', extending human fears about survival and desires for reproductive safety to animal worlds. Hecht was writing from a position of great uncertainty and upheaval himself, in the year of the Wall Street stock market crash, after a decade of runaway inflation in Weimar Germany, amid rising antisemitism, violent clashes largely instigated by paramilitary groups, and electoral gains by right-wing populist political parties. When Hecht suggests that maternal mosquitoes make choices that improve the likelihood of their survival, we might ask whether this consciously or unconsciously echoed his and his wife's own situation, and those of their extended families, as they assessed their surroundings. Three years later, in 1933, the Hecht family would leave Germany for Palestine, and it seems possible that this was already very much on Otto Hecht's mind in 1929–1930. Perhaps coincidentally, perhaps not, Hecht cites a British report on the 'applied entomology of Palestine' in his 1930 paper.[29] In any case, the path of the Hechts' later exile was to a large extent determined by the professional networks on which he could draw.[30]

Hecht's paper describes a relatively simple experimental set-up which he used to test the 'Wärmesinn' (today referred to as thermoception) of female mosquitoes. Hecht analyses the behaviour he observes for three species of distinct genera: *Anopheles maculipennis*, *Culex pipiens*, and *Anopheles bifurcatus*. Hecht finds that egg-laying mosquitoes seek out artificial ponds within the particular temperature ranges most conducive to their eggs' survival (this varied somewhat by species, in accordance with the description at the start of his paper of a wooded landscape with varying amounts of shade).[31] The ultimate aim of imagining mosquito perception, for Hecht, is to remove them and their habitats from areas near human

[28] Hecht, 'Über den Wärmesinn', p. 707.

[29] Patrick Alfred Buxton, 'Applied Entomology of Palestine, Being a Report to the Palestine Government', *Bulletin of Entomology Research*, 14 (1924), pp. 289–340. As cited in Hecht, 'Über den Wärmesinn', p. 709 and p. 724.

[30] Rudolph Hecht, *Recollections* (unpublished, 2000), pp. 10–12. Provided to Alice Christensen by Anita Hecht.

[31] Hecht, 'Über den Wärmesinn', pp. 706–07.

dwellings to reduce the burden of human disease for which mosquitoes are responsible. Hecht's methodological anthropomorphism resembles Benjamin's 'becoming-butterfly' mimesis; this is an anthropomorphism in the service of the hunt.

The Law for the Restoration of the Professional Civil Service of April 1933, put in place directly after the NSDAP took power, decreed that Jewish Germans ('non-Aryans') should be dismissed, to be replaced by non-Jewish Germans. In the months following April 1933, all Jewish personnel at the Hamburg Institute were dismissed. Hecht's mentor Erich Martini joined the NSDAP in the same year and scrambled for favour in the regime. He advised the Nazi government on entomology research and was eventually appointed to the governing body of an SS-run research unit that conducted experiments on humans imprisoned at Dachau.[32] Medical entomology provided a metaphorical arsenal and a set of scientific justifications, as well as the material means, for Nazi atrocities. The language of 'Schädlinge' and 'Schädlingsbekämpfung' was frequently invoked, from the late nineteenth century onwards, in antisemitic and eugenicist metaphors. Equating people with insects and 'Schädlinge' began in the realm of words, but became monstrously literal. Zyklon B was a cyanide gas developed by the Testa firm, based in Hamburg, for use as a pesticide. Testa sold large quantities of the chemical to the SS for use in the industrial mass murder perpetrated in concentration camps.[33]

1933 marked an abrupt end — of Hecht's promising research career in Hamburg, of a close working relationship with his still admired mentor, and of his young family's years in Hamburg. After this time, Hecht was unable to continue to write his monograph on mosquitoes or to continue his innovative research on the sensory apparatus of insects. In July 1933, Hecht was dismissed from the Institute, and in September, Otto, Rose, and their two sons left Germany and headed on a long journey to Palestine.

Like the boy in 'Schmetterlingsjagd', Otto Hecht grew up in a cityscape, as a middle-class German child in Ulm. As a young boy, he tagged along with some older children including his brother Paul in a club they called the 'Steinverein', where they would search for fossils that were plentiful in the area.[34] Later on, Otto was an enthusiastic member of his local Wandervogel troop.[35] He signed up for service in World War I, but narrowly missed

[32] After 1945, Martini sent an ingratiating and complaining letter to Otto Hecht. He had meanwhile provided a 1938 letter from Hecht to German authorities, as 'proof' that he deserved full exculpation for any involvement in the Nazi regime. Hecht's reply to Martini in 1946 masterfully and sorrowfully lays out the realities of the Hecht and Caro families' suffering during the period 1933–1945. See Rainer Hering, 'Nazi Persecution and the Pursuit of Science: Correspondence between Erich Martini and Otto Hecht, 1946–47', *Jewish Culture and History*, 3.1 (2000), pp. 95–124.

[33] Jansen, *Schädlinge*. In what must have later been a horrifying realisation, Otto Hecht had worked briefly for Testa in the 1920s and had published a brief research report on a trial of Zyklon B on rat populations.

[34] Paul Hecht, unpublished memoir, p. 1.

[35] Ibid.

seeing action because of his young age. After completing his doctorate in Munich, he began working at an agricultural research station in Landsberg an der Warthe (today Gorzów Wielkopolski), where he met Rose Caro. Rose spent her childhood in Landsberg, with her parents and two sisters. Like Otto, she was German and culturally Jewish. She had a prosperous and intellectually gifted extended family, particularly on her maternal side; among her relatives was Walter Benjamin, her second cousin and just two years her junior. Walter and Rose and their respective siblings may indeed have spent summer holidays together, as part of an extended family linked by matriarchs. (Was Walter's Brauhausberg really Landsberg in eastern, rather than western, Brandenburg? Was the boy truly alone with his butterflies, or were there other children and parents on the hunt, giddily trampling flowers and paths?) As a young woman, Rose became a teacher of French and English in Landsberg, where she met Otto Hecht, who enrolled in her English classes.[36] Rose and Otto married in 1926 and, after a brief period in the Czech countryside, they settled in Hamburg, where Rose gave birth to two sons in 1927 and 1929. After fleeing Germany, the Hecht family spent the years 1933–1940 in British Mandatory Palestine, first in Rehovot and then in Jerusalem. The family scraped by on Otto's small and sporadic stipends, as well as Rose's savings from her time as a teacher. Otto found precarious employment in agricultural insect control in Rehovot and, later, in mosquito control initiatives. Combatting malaria was a central project of British authorities and Jewish local government in the 1920s and 1930s, and their cooperation in the face of 'malarial exigencies' supported state-building initiatives by Jewish settlers in Palestine.[37] Neither Rose nor Otto was particularly comfortable within the observant Jewish and Zionist communities in which they found themselves, and they despaired at escalating violence between Jews and Arabs from 1936 onwards. The Hechts stayed in Palestine until 1940, at which time they left for Venezuela, where Otto had been offered a governmental research position. This did not bring the stability the family had hoped for, due to political turmoil in Venezuela. In 1945, the family travelled onward to Mexico.

Entomological research has a long tradition as a family affair. Like the collaborative work of Americans Elizabeth and George Peckham and the studies of Swiss entomologist Auguste Forel and his family, insect research

[36] Kalthoff, *Ich war Demokrat und Pazifist*, p. 18.

[37] Omri Tubi, 'Kill Me a Mosquito and I Will Build a State: Political Economy and the Socio-Technicalities of Jewish Colonization in Palestine, 1922–1940', *Theory and Society*, 50.1 (2021), pp. 97–124, doi:10.1007/s11186-020-09402-4. Tubi shows how socio-technical arrangements focused on health became integral to settler-colonial and state-building initiatives by Jewish settlers in Palestine. According to Tubi, 'exigencies-based political developments set Jewish settler state-building on a particular trajectory that aimed at excluding and separating from the Palestinians' (p. 100), and malaria was among these exigencies.

became ever more part of the Hechts' family life.[38] As the Hechts travelled across the world in improvised and precarious circumstances, with very few resources at their disposal, they became a true 'experimental multispecies household', as recently described by historian of science Deborah Coen.[39] During their time in Venezuela, Otto took his younger son, Rudolph, with him on outings to collect insects; Rudolph recalled later in life with some disgruntlement that his father used him as bait to catch mosquitoes.[40] By the time they arrived in Venezuela, and then settled in Mexico City, Otto often involved Rose in his investigations and described her as his laboratory assistant.[41] In addition to her research assistance, however, Rose also shouldered much of the household labour, and she managed the daily tasks of parenting the Hechts' two sons, the younger of whom was disabled. At the same time, all of the Hechts studied the new biotopes in which they found themselves.

Among a number of duties in the laboratory, Rose drew sketches of the insects they studied.[42] A number of these drawings were reproduced in Hecht's 1954 monograph *Plagas agrícolas: introducción a la biología de las plagas causadas por insectos y los métodos de combatirlas*.[43] Rose's portrait of a grasshopper in *Plagas agrícolas* provides a striking encounter with one of the insects in their new, adopted home (see Fig. 1). The grasshopper appears to look out at us, its compound eyes returning the reader's gaze as it gnaws at a leaf of clover. We can imagine the loving attention and intimacy of Rose's drawing hand, in its careful reproduction of the insect's fine hairs and its gnomic, many-faceted regard of the reader. The name of the grasshopper is given in the caption as 'chapulin'. This word is embedded in its landscape; it is used in Mexico and Central America as the name for a type of grasshopper that has been a dietary staple for humans for many centuries. Its longstanding importance is reflected in its etymology: 'chapulin' derives from the Nahuatl word 'chapōlin'.[44] In *Plagas agrícolas*, we find fragments of the Hecht family's adaptation to and curiosity about their new linguistic and animal landscapes, as well as an important record of Rose's scientific encounters with insects. In other words, the Hechts' early years in Venezuela and Mexico provided the occasion for Rose to

[38] On the Peckhams and Forels, see e.g. Deborah Coen, 'The Experimental Multispecies Household', *Historical Studies in the Natural Sciences*, 51.3 (2021), pp. 330–78, doi:10.1525/hsns.2021.51.3.330.

[39] Ibid.

[40] Personal communication with Ilse Hecht, wife of Rudolph Hecht, as well as material from Rudolph Hecht, *Recollections*, p. 9.

[41] Oral communication with Ilse Hecht, wife of Rudolph Hecht.

[42] Otto Hecht letter to Magda Rieper, May 1947, as cited in Hering, 'Nazi Persecution and the Pursuit of Science'.

[43] Otto Hecht, *Plagas agrícolas: introducción a la biología de las plagas causadas por insectos y los métodos de combatirlas* (Editorial E.C.L.A.L., 1954), p. 44.

[44] Michel Launey, *An Introduction to Classical Nahuatl*, trans. and adapted by Christopher Mackay (Cambridge University Press, 2011). The word chapōlin appears several times in Launey's text.

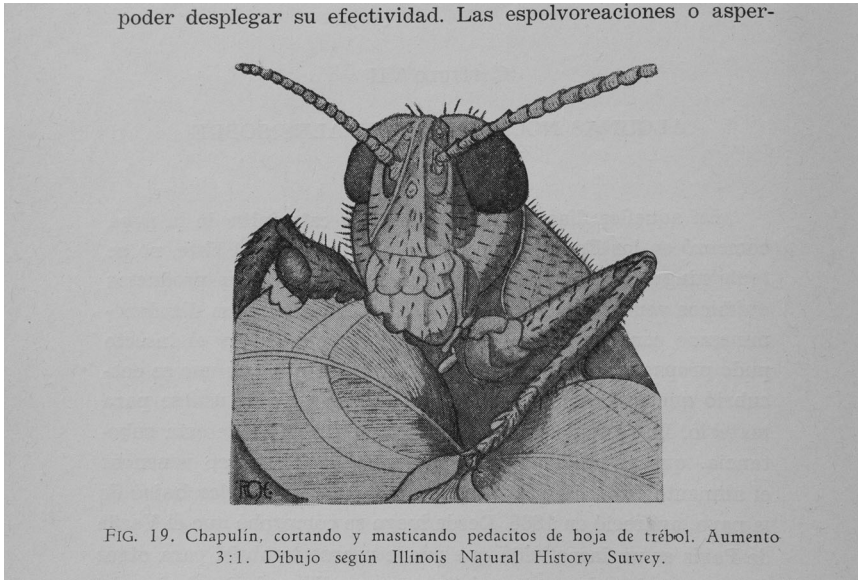
poder desplegar su efectividad. Las espolvoreaciones o asper-

FIG. 19. Chapulín, cortando y masticando pedacitos de hoja de trébol. Aumento 3:1. Dibujo según Illinois Natural History Survey.

Figure 1. Illustration of a 'chapulin' (grasshopper native to Mexico and Latin America) by Rose Caro Hecht, in Otto Hecht's monograph *Plagas agrícolas: introducción a la biología de las plagas causadas por insectos y los métodos de combatirlas*, p. 46.

'become scientist', as her cousin Walter Benjamin had described in his 'Schmetterlingsjagd'. Yet the portrait of the grasshopper also reveals the persistent contradictions and ambiguities of Otto and Rose's insect studies. The grasshopper appears, after all, in a volume on how to combat insect damage to agricultural crops. The surrounding Spanish text concerns the use of pesticides that work by ingestion. The grasshopper meets the reader's eye mid-bite, yet in reality this grasshopper, a human food source, is the object of agricultural initiatives to eradicate 'pests'.

ANT LETTERS: HANNS HEINZ EWERS AND RICHARD B. GOLDSCHMIDT

Hanns Heinz Ewers (1871–1943) was a German actor, poet, and writer of short stories and novels. While he is most famous for being one of the first authors to write a screenplay for the silent horror film *Der Student von Prag* (1913), he was equally celebrated for his 1911 novel *Alraune. Die Geschichte eines lebenden Wesens*, which tells the story of the vamp Alraune who was born of a scientific experiment. In his time, he was compared to both Edgar Allan Poe and the Marquis de Sade, because his writing often

draws on horror themes and flouts conventional morality. Ewers's writing was deeply interested in scientific advances of the day, especially as they relate to gender and sexuality, from artificial insemination, discussions of heredity and tissue engineering to reproductive technology and transplant medicine, and he speculated about their potential significance and impact on German culture and society.[45] While his work was politically liberal and anti-moralist before the Great War, he increasingly rejected the Weimar Republic and became enchanted with the mythos Germany, which he saw realised in fascist ideals.[46]

In 1925, Ewers applied his interest in science to a new focus and genre: *Ameisen* is, ostensibly, a comprehensive popular science book about the life of ants, with Ewers as first person narrator.[47] It combines this popular scientific focus on ants with his usual erotic fantasy and horror writing by inserting stories about humans that increasingly become ant-like in their moral and erotic behaviour. As Charlotte Sleigh has shown in her extensive work on the cultural history of myrmecology (the study of ants), both myrmecologists and writers sometimes portrayed ants as alien, as different to humans as possible, but their skilfulness, independence and intelligence also led to fears that they might attain skills similar to ours.[48] Ants here become the perfect subject of erotic and horror stories.

In his opening chapter, Ewers explains that his book is interspersed with 'myrmekomorphe Geschichten' (*Ameisen*, p. 21). If an anthropomorphic view of the non-human world requires the attribution of human characteristics to animals, then myrmecomorphism means the attribution of formic (ant-like) characteristics to the human world:

> [E]s hat mir Spaß gemacht, den schweren Stoff mit ein paar Gedichten zu unterbrechen. Weil ich ein Mensch bin, muß ich, trotz dem Gefasel verknöcherter Wissenschaftler, die Ameisen wie alle Tiere menschlich sehen: anthropomorph. Warum also soll ich nicht einmal auch Menschen — ameisenhaft sehen? Myrmekomorph? (*Ameisen*, p. 21)

[45] See, for example, Irmela Marei Krüger-Fürhoff and Tanja Nusser, 'Die Fabrikation des Menschen. Literarische Imaginationen von *tissue engineering*, Reproduktionstechnologien und Transplantationsmedizin im ersten Drittel des 20. Jahrhunderts', *Internationales Archiv für Sozialgeschichte der deutschen Literatur*, 33.1 (2008), pp. 72–93, doi:10.1515/iasl.2008.004.

[46] On Ewers's politics and his membership of the NSDAP, see Wilfried Kugel, *Der Unverantwortliche: das Leben des Hanns Heinz Ewers* (Grupello, 1992), pp. 302–75.

[47] Hanns Heinz Ewers, *Ameisen* (Georg Müller, 1925). All subsequent references are to this edition and page numbers given within the text. *Ameisen* was republished in 1929, an illustrated version appeared in 1930, and it was reissued again in 1943, shortly after Ewers's death. See Kugel, *Der Unverantwortliche*, p. 269. Ewers was not only interested in non-human animals but also the non-human world more broadly, including plants, to think through morality and marginality. See Joela Jacobs, *Animal, Vegetal, Marginal: The German Literary Grotesque from Panizza to Kafka* (Indiana University Press, 2025).

[48] Charlotte Sleigh, *Ant* (Reaktion, 2003).

For Ewers, myrmecomorph storytelling serves to reject the strict logic of science and its dry and senseless 'Gefasel'. Although he describes scientists here as 'verknöchert', as inflexible in their thinking, his playful 'warum… nicht' suggests that Ewers the writer can be more flexible and creative in this thinking.

Myrmecomorph storytelling presents an inversion of perceived boundaries, by turning inside out the human-animal perspectives. This logic of inversion was central to thinking about gender and sexuality in Weimar Germany, too, and Ewers was deeply invested in this. This is important because it shows that thinking about 'Geschlecht', both in the sense of gender as well as generation and reproduction, was central to his work on *Ameisen*. Certain theories about the origin and nature of homosexuality in the late nineteenth century painted a picture of the homosexual as an invert, with a 'male soul in a female body', thereby merging the logic of gender and sexuality. This significantly influenced Magnus Hirschfeld's 'Zwischenstufenlehre', developed in the early decades of the twentieth century, which saw all individuals on a sliding scale from male to female in both body and mind.[49] Ewers was familiar with these theories and had ties to various queer circles in Berlin. He was known in the sexological and gay rights activist circles around Hirschfeld's Institute of Sexology in Berlin, but also published poems criticising censorship laws in the newspaper *Der Eigene*, aimed at masculinist homosexual circles which rejected the theory of inversion.[50] In 1905, Ewers was invited to a meeting of the Wissenschaftlich-humanitäres Komitee, the first German gay rights organisation, co-founded by Hirschfeld, to present excerpts from his homoerotic play *Enterbt*.[51]

Ewers's interest in the gender-bending plasticity of bodies and identities in the 1920s informs his species-bending storytelling in *Ameisen*. In both cases, the playful, often humorous inversion of assumed binaries — male and female, human and non-human — is an explicit rebuttal of the inflexible thinking of scientists and their 'schwer[e] Stoff', the dense language of science that requires literary intervention. Ewers's affiliation with a range of homosocial organisations that were fundamentally at odds with one another — Adolf Brand's masculinist circles as well as Hirschfeld's theory of sexual intermediacy — shows that he is less interested in dogmatic theories of gender and sexuality and predominantly interested in questioning bourgeois sexual morality and prudishness, which he despised. In *Ameisen*, then, Ewers doesn't propose myrmecomorphic

[49] Incidentally, Walter Benjamin knew Magnus Hirschfeld, too. See Heike Bauer, *The Hirschfeld Archives: Violence, Death, and Modern Queer Culture*, Sexuality Studies (Temple University Press, 2017), p. 81, doi:10.26530/oapen_628406.

[50] Kugel, *Der Unverantwortliche*, p. 58.

[51] Kugel, *Der Unverantwortliche*, p. 84 and p. 255. Hanns Heinz Ewers, 'Enterbt', in *Jasminblüthe. Schwule deutschsprachige Theaterstücke um 1900*, ed. by Manfred Herzer (Männerschwarm, 2018), pp. 125–72.

storytelling as a new dictum that asks for the programmatic rejection of anthropomorphism, but instead fulfils a destabilising and *queering* function — queer in the sense that it unsettles normative binaries — that lets him see humans through the (perverse) eyes of ants.

While *Ameisen* ostensibly focuses on presenting a comprehensive introduction to the study of ants, each chapter is followed by humorous (and ever more myrmecomorph) anecdotes of Ewers's experiences on Brioni, an island in the Adriatic sea, in which Ewers's obsession with ants comes to the fore and in which ants inspire rebellious action in other hotel guests. The first of many anecdotes introduces the hotel manager's displeasure of Ewers's intimate study of ants, which he conducts in his hotel room: 'Es seien Klagen über mich eingelaufen, wegen meiner Ameisennester, die ich im Arbeitszimmer herumstehn habe' (*Ameisen*, p. 149). As part of his research for the book, Ewers installed artificial ant nests in his hotel room. Such artificial nests came in a variety of designs and most show ants suspended between two plates of glass to allow visibility of ant activity.[52]

The hotel manager takes particular issue with Ewers's choice of 'pet': 'Ich möge soviel Hunde und Katzen und Papageien und Pferde mitbringen, wie ich wolle, nur kein — Ungeziefer!' (*Ameisen*, p. 150). The language of insects as 'Ungeziefer' or vermin is unsurprising. While entomology as a pastime activity for the educated natural scientist focuses on understanding insect behaviour, entomology as an economic enterprise focuses on the eradication of nuisance household pests, as Hecht's positions in and adjacent to the pesticide industry, discussed in the previous section, illustrates.

In the passage discussed above, both ants and the author himself are introduced as misfits. Ewers refuses to 'draw the line between pest and housemate', a defining feature of many domestic entomologists.[53] Here, entomology is not the studious obsession of the learned man, but is recast as the passion of the outsider and misfit who goes against the grain of respectability.[54] This is certainly how Ewers would have liked to be seen. Elsewhere, Ewers even compares his radical pursuit of knowledge across disciplinary boundaries to the work of Goethe: 'wir Dichter haben nun einmal die Eigentümlichkeit, unsere Nasen in alles hineinzustecken […] Was ging den Goethe die Knochenlehre an, was die Farbenlehre, was die Metamorphose der Pflanzen?' (*Ameisen*, p. 9). In the tradition of Goethe, Ewers makes clear that he will not submit himself to scientists as dominant rule-givers, but sees himself as the transgressive rule-breaker full of sexual prowess. Writing about ants is, in a word, sexy.

[52] See Coen, 'The Experimental Multispecies Household'.

[53] Coen, 'The Experimental Multispecies Household', p. 349.

[54] This autofictional persona of the transgressive rule-breaker and rebellious underdog is well established across Ewers's oeuvre in the fictional characters Frank Braun and Jan Olieslager.

Ewers claims that his obsession quickly catches on:

> Solange die Brionischen Inseln in der blauen Adria liegen, hat sich gewiß nie ein Mensch um die Ameisen gekümmert, die hier rumkrabbeln. Heuer ist das anders geworden: mein böses Beispiel hat die guten Sitten verdorben: alles fühlt sich verpflichtet, die Sechsbeiner zu beobachten. Es ist eine regelrechte Seuche ausgebrochen. (*Ameisen*, p. 175)

If a moment earlier ants were the unwanted vermin to be banned from hotel grounds, the human hotel residents and their behaviour are now plaguing their environment. Children start to play 'Ameisenstadt': a girl named Lollo pretends to be dead, mimicking ant behaviour, and a boy called Jack Horner plays ant queen, crossing boundaries of both gender and species (*Ameisen*, p. 239). Distracted by the 'Seuche' of ant-keeping, Ewers claims: 'Die wichtigsten Fragen bleiben unerörtert. Wen kümmert's noch, […] [d]aß der Hans seiner Schwester Susi die Kleider stahl und als Mädel im Tanzsaal herumhopste?' (*Ameisen*, p. 175). Ewers's ironic claim about the 'importance' of this question makes clear that in the myrmecomorph inversion of perspectives, both gender and species distinctions lose their relevance. Myrmecomorph storytelling allows *Ameisen* to pay attention to human behaviour through new eyes and thereby also invert and unsettle assumptions about bourgeois sexual morality.

In Benjamin's 'Schmetterlingsjagd', the desire to pursue butterflies is constantly frustrated. Ewers's private correspondence shows that he, too, experiences this frustration of desire as a fundamental part of his scholarly pursuit. In 1924, while Ewers was writing *Ameisen* from Brioni, he was in regular correspondence with Richard B. Goldschmidt. Goldschmidt was a German-Jewish geneticist based at the Kaiser-Wilhelm-Institut für Biologie in Berlin and a prolific writer working intensely with his own chosen insect species, the moth *Lymantria dispar*. Ewers and Goldschmidt had met in 1918 at Fort Oglethorpe, Georgia, where both were detained as 'dangerous enemy aliens'.[55] During this time, Goldschmidt was in the middle of a research project on sex determinism. In 1916, Goldschmidt was working on an article tentatively suggesting that his research on intersex moths could inform thinking about human homosexuality and its decriminalisation.[56]

[55] Jeanne Glaubitz Cross and Ann K. D. Myers, '"Orgelsdorfer Eulenspiegel" and the German Internee Experience at Fort Oglethorpe, 1917–19', *The Georgia Historical Quarterly*, 96.2 (2012), pp. 233–59. Whereas Goldschmidt was erroneously detained, Ewers had, since 1914, regularly contributed articles to the propagandist newspaper *The Fatherland*. See Kugel, *Der Unverantwortliche*, p. 203. Richard B. Goldschmidt, *In and Out of the Ivory Tower: The Autobiography of Richard B. Goldschmidt* (University of Washington Press, 1960), pp. 173–85.

[56] Richard B. Goldschmidt, 'Die biologischen Grundlagen der konträren Sexualität und des Hermaphroditismus beim Menschen', *Archiv für Rassen- und Gesellschafts-Biologie*, 12 (1916/18), pp. 1–14. See Ina Linge, 'The Potency of the Butterfly: The Reception of Richard B. Goldschmidt's Animal Experiments in German Sexology around 1920', *History of the Human Sciences*, 34.1 (2021), pp. 40–70, doi:10.1177/0952695119890545.

For Ewers, this overlap in scientific and sexual-political interests would have made friendship with Goldschmidt appealing.[57]

Goldschmidt and Ewers stayed in contact after their shared experience of imprisonment. The entomological scholarship that Ewers dismissively derides as 'Gefasel' (*Ameisen*, p. 21) is revealed as quite another thing in his letters to Goldschmidt: understanding myrmecological research — its 'fremde Sprache' — is an overwhelming task. He writes to Goldschmidt: 'Wenn ich […] die Emsen verarbeitet habe, verspreche ich heilig nie wieder mich mit "Wissenschaft" (???) zu beschäftigen!!'[58] His questions to Goldschmidt become increasingly frantic: 'Wissen Sie vielleicht, wieviele Chrom. die männliche und weibliche Emse hat???'[59] His desire to master the definitive language to describe insects is clear, but so is his frustration.

This frustration, however, cannot be taken at face value. Just as for Benjamin, the hunt and its delayed fulfilment of desire form part of the intellectual eros of his pursuit, for Ewers the frustration of intellectual desire, its fumbling, is part of the pursuit of ant knowledge. Ewers needs Goldschmidt. The urgency of this need is palpable in Ewers's plea to Goldschmidt: 'Es wäre sehr lieb, wenn Sie mir gleich antworten!!!'[60] Ewers desires the cathartic release provided by his confessional exchange with Goldschmidt through the expression of frustration — 'nie wieder […] "Wissenschaft" […]!!' — as well as vitriolic anger. About myrmecologists and entomologists he writes to Goldschmidt: 'Man sollte sie alle ins W.C. werfen (sie selbst, nicht die Bücher!) — und dann schleunigst die Kette ziehn!!' He follows this up with: 'Alle diese Menschen sind zum Kotzen!'[61]

For Ewers, the epistolary performance of frustrated desire is an essential part of the 'Jagd'. Ewers's coarse comments give vent to his feelings of frustration, and form part of the playful exchange of remarks between the two, which often includes humorous and loose-lipped slighting of colleagues near and far. Sometime in 1924 Ewers writes to Goldschmidt to ask him a series of questions about the German names for certain ants. In June 1924, Goldschmidt responds, providing various names and digressing to provide further explanations as expert and insect enthusiast. Goldschmidt is unable to answer all of Ewers's questions and adds in his typewritten letter: 'Ich muss einmal an einen Kenner schreiben, der vielleicht den deutschen Namen weiß.' In a handwritten note after this

[57] Despite this obvious link, the relationship between Ewers and Goldschmidt and their letter exchange has not been subject to scholarly attention. Even Ewers's biographer Wilfried Kugel does not comment on it. See Kugel, *Der Unverantwortliche*.

[58] Hanns Heinz Ewers to Richard Benedict Goldschmidt, 4 May 1924, Richard Benedict Goldschmidt Papers, BANC MSS 72/241 z, Berkeley, Bancroft Library (hereafter cited as RBG Papers). Underlining in original.

[59] Ibid., underlining in original.

[60] Ibid., underlining in original.

[61] Circa 1924, RBG Papers.

sentence, Goldschmidt writes '(Wasmann, welcher Witz!)'.[62] The 'Witz' is easily explained: Erich Wasmann was a Jesuit priest whose work on ants and termites was grounded in Christian beliefs. Ewers's anti-religious stance and often blasphemous writing wouldn't have endeared him to Wasmann. Goldschmidt forwards the letter to Ewers and adds a note himself: 'Ich habe ihm natürlich nicht gesagt, für wen die Information sein soll, sonst hätte der gute Pater wohl Feuer gespuckt.'[63] Goldschmidt's apparent glee at slighting Wasmann can be understood as a response to the ill-tempered tone of Wasmann's own letter: 'Warum alles "verdeutschen wollen", wenn es anders besser geht? Das kann auch vielleicht dem Ihnen befreundeten Schriftsteller als Wink dienen.'[64] In thanks to Goldschmidt's effort and as a response to Wasmann's 'Wink', Ewers sends Goldschmidt a humorous *in memoriam* poem about the cleric (particularly macabre as the latter was clearly still alive) in which he rhymes: Wasmann 'macht aus jedem Lauseschеißchen | Für GOTTES ALLMACHT ein Beweischen'.[65] Ewers proceeds to send at least three further rude and humorous poems deriding the work of other respected entomologists including William Wheeler, Auguste Forel and Karl Escherich. Ewers was so amused by his own ingenuity that an early manuscript of *Ameisen* suggests that he was planning to include these poems in the book and, in a final twist, also indicates the inclusion of a poem about Goldschmidt, though he never got as far as drafting the poem.[66]

The letter exchange between Ewers and Goldschmidt sustains a private space of shared intellectual eros, in which Ewers can muckrake respected entomologists and Goldschmidt can respond with glee. The camaraderie of the letters is further expressed in the act of signing some of their later letters with their prisoner of war numbers, to recall the beginnings of their friendship during internment.[67] For Ewers, these letters provide information, but more importantly an opportunity to vent his frustration and to be rewarded with catharsis and gleeful joy. But Goldschmidt, too, gains something from this exchange: through Ewers he gains recognition for his scientific clout and connections, and he is also able to satisfy his cultural aspirations by gaining investment in the literary sphere through Ewers.

Just as Benjamin describes how the boy's hunt culminates in an act of self-conscious violence, Ewers's pursuit of his ants teems with violence.

[62] Richard Benedict Goldschmidt to Hanns Heinz Ewers, 19 June 1924, Hanns Heinz Ewers Papers, HHI.90.5014.621, Düsseldorf, Heinrich-Heine-Institut (hereafter cited as HHE Papers).
[63] Richard Benedict Goldschmidt to Hanns Heinz Ewers, 30 June 1924, HHE Papers.
[64] Erich Wasmann to Richard Benedict Goldschmidt, 26 June 1924, forwarded to Hanns Heinz Ewers 30 June 1924, HHE Papers.
[65] Ewers, c. 1924, RBG Papers, emphasis in original.
[66] Handwritten manuscript of *Ameisen*, 1924, Hanns Heinz Ewers Papers, HHI.90.5014.26, Düsseldorf, Heinrich-Heine-Institut.
[67] Richard Benedict Goldschmidt to Hanns Heinz Ewers, 8 August 1924, HHE Papers.

Benjamin warns us that, by pinning down his butterflies, the boy forecloses any opportunity to fully understand their 'strange language', expressed in their erratic movement. *Ameisen*, like many myrmecological texts from the 1920s, ties the study of ant social organisation to the study of human society and nationhood. For example, the existence of what was understood to be slave-keeping among certain ant species led to widely divergent interpretations that included ants in a political and culture war.[68] As Tanja Nusser shows, Ewers's own interpretation of ant societies directly responds to the crisis of the Great War and the Weimar Republic, in anticipation of the Third Reich: in his own words, his ants present 'das Urbild des streng nationalen Arbeiterstaates' (*Ameisen*, p. 56), a hard-working nationalistic 'Volk' par excellence.[69] In *Ameisen*, this 'Volk' is threatened by foreignised, racialised and gendered rival ant colonies that are described in racist language as 'Zigeunerameisen' (*Ameisen*, p. 163), here meant to denote a stereotypically disordered and lawless people.[70] Ewers similarly describes the convoluted language of science as 'Zigeunerdeutsch' (*Ameisen*, p. 20), a language that wilfully causes disorder and lawlessness in knowledge production.[71] His own writing proposes to break through the nonsense of scientific language with the words: 'Dies Buch ist in Deutsch geschrieben' (*Ameisen*, p. 20). Ewers confidently claims to wrestle back control over scientific language and the dissemination of insect knowledge from foreignising forces by claiming that this can only be done by the German writer, with German in its double function as both language and nationhood, with Germany as ethnostate. His nationalistic stance stands in awkward dialogue with the openness implied by myrmecomorph writing to disrupt, unsettle and queer established binaries.

[68] Abigail J. Lustig, 'Ants and the Nature of Nature in Auguste Forel, Erich Wasmann, and William Morton Wheeler', in *The Moral Authority of Nature*, ed. by Lorraine Daston and Fernando Vidal (University of Chicago Press, 2003), pp. 282–307, doi:10.7208/chicago/9780226136820.001.0001.

[69] Tanja Nusser, '"Haben Sie nur keine Angst vor der exakten Wissenschaft. Es ist eine rechte Spielerei, so wie Kinder spielen": Hanns Heinz Ewers' *Ameisen* (1925)', in *Zwischen Popularisierung und Ästhetisierung. Hanns Heinz Ewers und die Moderne*, ed. by Barry Murnane and Rainer Godel (Aisthesis, 2014), pp. 211–28.

[70] Many of these racialised presentations of different cultures are already present in Ewers's travel writing from before the Great War, when he travelled extensively across Europe, Australia, North and South America, and Asia. On his travel reports and Ewers's racism, see Kugel, *Der Unverantwortliche*, pp. 112–15.

[71] About the history of the term 'Zigeunerin' and 'Zigeuner', see *Die gesellschaftliche Konstruktion des Zigeuners. Zur Genese eines Vorurteils*, ed. by Jacqueline Giere (Campus, 1996); Claudia Breger, *Ortlosigkeit des Fremden. 'Zigeunerinnen' und 'Zigeuner' in der deutschsprachigen Literatur um 1800* (Böhlau, 1998).

CONCLUSION

The writings of both the Hechts and Ewers about insects vacillate between intimacy and violence on a small and large scale. Hecht's careful study of mosquitoes and their habitats is funnelled into economic projects that commodify his research, but also aim to improve human health and ensure the financial stability of his family. In the face of geopolitical horror and antisemitic violence, Hecht mourns the opportunities he will not have while searching desperately for work to support his household. At the same time, in the face of the pathlessness of exile and economic uncertainty, the Hecht family forms something like an 'experimental multispecies household',[72] and Rose has the opportunity, in their dire circumstances, to work alongside her husband as a researcher. Otto and Rose learn new insects and new words; these encounters are reproduced for the reader in *Plagas agrícolas* (1954). The portraits and landscapes of the Hechts' entomology reflect encounters with entangled life.

Ewers's myrmecomorph philology is one of both love of words and a violence of language. His desire to 'speak the strange language' of ants, and to become an authoritative author figure who can invert, disrupt and ultimately own the logic of science, serves to make meaning of his own writing as inherently German. *Ameisen* promises to use the power of language and literature to bring us closer to Ewers's own version of knowing insects, but the knowledge that he promises ties insect knowledge to nationalistic ideals of Germany and the German language threatened by foreignised and racialised forces, to devastating political ends.

Our discussion of the studies by Ewers and the Hechts has dwelt on a number of features; this history cannot be told wholly and truthfully without moving between scales and registers. Guided by Benjamin's invitation for philological inquiry to be led astray, our exploration of insects in and as German life and letters has been interdisciplinary, if not undisciplined. Along the way, we have noted the ways in which knowledge can do violence, can foreclose meaning, or fail in other ways, as Benjamin's text thematises and as Gillian Rose warns in her suggestion that we look at, but not touch, the lacewing fly to which we attend. Beisel, Kelly and Tousignant's 2013 essay 'Knowing Insects' argues for the social study of insect knowledge-making as a space of intellectual possibility:

> Insects enable conceptual movement: they summon prehistoric pasts and unpredictable futures, traverse spaces that exceed our range of vision and generate unfamiliar attachments. Their vitality strains conventional categories of social analysis. […] Insects, we suggest, are not only good to think with because of the analogies one might draw to human life and social

[72] Coen, 'The Experimental Multispecies Household'.

> order. Thinking with insects is foremost a task of theoretical innovation, one that has allowed us to re-examine how life produces space, time and history, and to intensify entanglements of ecological, institutional and experimental relations.[73]

As they consider various aspects of human/insect interaction, the authors continually return to a text which helps them to unpack the various facets of their argument: none other than Benjamin's 'Schmetterlingsjagd'. Their reading is sensitive to the specific images, language and registers of the text, as the authors read 'Schmetterlingsjagd' as an allegory for scientific work and its aporias, as well as an expression of the richness of encounters between human and animal. Rather than suggesting that literary analysis belongs to us, and not to the geographers and anthropologists, or implying that we 'do it better' and staking claim to a particular territory, we have pointed out that the work of knowing insects can be thought through a philological lens, to reconsider life and letters beyond the human. As the editors of a new collection of essays on insects in the history of science note, 'insect histories make for exciting sites of multidisciplinary congregation.'[74]

In our pursuit of an insect philology, we ask ourselves: what would it require to be led astray 'von den gepflegten Gartenwegen fort in eine Wildnis' in our studies? Here we can reclaim the slippery and open language of myrmecomorphism, which sees the human world through the compound eyes of ants in hundreds of fragments, all at once. We are in pursuit of forms of attention that do not foreclose meaning, but instead let several readings coexist and coalesce into the compound vision of an (always anthropomorphic) insect philology. We refuse to sever letters from life; we insist on an ethic of endless curiosity. And we have found, in our collaborative work on this article, that collaboration is a central and radical method of this endeavour, radical in that it unsettles the expectation of the genius lone scholar in their ivory tower. The joy of being led astray, together, and in dialogue, sustains our academic pursuits. This collaborative method is central to our thinking and to our enjoyment — and its frustration — as we pursue our individual research projects. This is our philology.

[73] Uli Beisel, Ann Kelly and Noémi Tousignant, 'Knowing Insects: Hosts, Vectors and Companions of Science', *Science as Culture*, 22.1 (2013), pp. 1–15 (p. 12).
[74] Lisa Onaga and Dominik Hünniger, 'Introduction: Expanded Perspectives on Tiny Animals as Epistemic Agents', *Isis*, 115.1 (2024), pp. 126–30.