

HISTORY OF THE “HUMAN SCIENCES” AND WALLACE’S SCIENTIFIC VOYAGE IN THE AMAZON: NOTES ON HISTORIOGRAPHICAL ABSENCES

História das “ciências humanas” e a viagem científica de Wallace na Amazônia: notas sobre ausências historiográficas

Historia de las “ciencias humanas” y el viaje científico de Wallace en Amazonia: notas sobre las ausencias historiográficas

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RESUMO

Este ensaio analisa uma bibliografia historiográfica particular com o objetivo de abordar a divergência entre história e história da ciência. Defendo que a ausência da história das ciências humanas na historiografia da ciência expande a distância entre a história da ciência e outras disciplinas dos estudos históricos. Para ponderar essa hipótese, analisarei a historiografia sobre a viagem científica de Alfred Russel Wallace na Amazônia (1848-1852), argumentando que a omissão da dimensão etnográfica dessa expedição expõe aspectos importantes para compreender a natureza da tal dissensão e seus efeitos na construção da história das ciências humanas.

PALAVRAS-CHAVE: Historiografia; História da ciência; História das ciências humanas; Wallace; Amazônia; Etnografia.

ABSTRACT

This essay analyses a particular historiographical bibliography with the aim of addressing the divergence between history and history of science. I argue that the absence of the history of the human sciences in the historiography of science expands the distance between the history of science and other disciplines of historical studies. To ponder this hypothesis, I will analyse the historiography of Alfred Russel Wallace's scientific voyage in the Amazon (1848-1852), arguing that the omission of the ethnographic dimension of this expedition exposes important aspects to understand the nature of such dissension and its effects on the construction of the history of the human sciences.

KEYWORDS: Historiography; History of science; History of the human sciences; Wallace; Amazon; Ethnography.

RESUMEN

Este ensayo analiza una bibliografía historiográfica particular con el objetivo de abordar la divergencia entre historia e historia de la ciencia. Sostengo que la ausencia de la historia de las ciencias humanas en la historiografía de la ciencia amplía la distancia entre la historia de la ciencia y otras disciplinas de los estudios históricos. Para reflexionar sobre esta hipótesis, analizaré la historiografía del viaje científico de Alfred Russel Wallace en la Amazonia (1848-1852), argumentando que la omisión de la dimensión etnográfica de esta expedición expone aspectos importantes para comprender la naturaleza de tal disensión y sus efectos en la construcción de la historia de las ciencias humanas.

PALABRAS CLAVE: Historiografía; Historia de la ciencia; Historia de las ciencias humanas; Wallace; Amazonia; Etnografía.

INTRODUCTION

The isolation of History of science in the Historical Studies is a well-debated theme. Thomas Kuhn (1977) even defended that this "tension" defines the very discipline's identity. Those who sought to appraise this gap focused so much on the isolation that it was constructed as "the cause" of itself and not evaluated as a possible "result" of other issues; one of these is the opacity of the history of the human sciences, which is an unexplored topic even among the densest analyses of the schism.

I support the idea that the history of the human sciences' non-place expands the distance between History of science and History *tout court*. I intend to approach the schism in a somewhat different way from how it was scanned so far: exploring a particular historiographical bibliography to verify implications of this absence in the isolation of the History of science in the Historical Studies.

An overall approach to the "history of the human sciences" would be impossible, since it is constituted by small-scale studies and even claiming that they are part of a single field is not a simple task. Thus, in order to produce effective analyses, I shall limit my scope to the 19th century Ethnology and Anthropology, knowledge fields very close to what would be now regarded as "human sciences" and yet not reducible to this category because of their emergence as an offshoot of both biological sciences and philological studies.

The historiographical sample from which I am going to ponder my hypotheses is about the Amazonian scientific voyage of the British naturalist Alfred Russel Wallace (1823-1913). A hundred and seventy years ago (1848) Wallace began his collecting journey along with the naturalist-collector Henry Walter Bates (1825-1892), who remained in the field for eleven years, while the former concluded his journey in 1852 with a tragic return to England, caused by a shipwreck that destroyed most of his personal collections.

This essay does not deal with this collecting voyage itself, but with the historiography that painted its image. Regarding this enterprise, historians evidenced, for instance, Wallace's first systematised speculations about species distribution and riverine barriers to migration and also his ideas of the role of divergence of varieties and mimetism to evolution, topics that have led scholars to realize impacts of the expedition to many fields of knowledge in the 19th century.

Nevertheless, these achievements are not equally applicable for inquiries into the relevance of Wallace's voyage to the Victorian "sciences of man", and even less, if one thinks about the receptions of his ethnography in early Brazilian Anthropology and Ethnology from the same period.

This essay intends to raise questions regarding this gap, which results from a scission between fields of knowledge, which until the beginning of the 20th century dramatically differed

from current academic human sciences, and whose epistemological grounds and sets of practices cannot be understood as based in the *a priori* of the “two cultures” thesis (Snow, 1959).

I will argue that the undervaluation of the ensuing ethnography from Wallace’s expedition results from two other aspects, which are rooted in the historiography of science and demonstrable in the Wallaceana.¹ The first regards the limitation of History of science to the “natural sciences”, expressing an ahistorical view of the “human sciences” as a category that puts historians and historians of science in paradoxical situations. The second concerns the double displacement that the history of the human sciences requires: it depends on the harmonisation between “diachrony” and “synchrony” and claims a radical historicisation of the very object, man, which humanities have usually taken for granted.

This essay is arranged in a section of historiographical analysis and a section of general statements. The works to be analysed are classified in sets: A) Works that deal directly with Wallace’s Amazonian journey; B) Works that deal indirectly with Wallace’s Amazonian journey and; C) Works on Wallace’s anthropological views that deal directly/indirectly with Amazonian ethnography. Sets C and B initiate the discussion in order to show that the fragmented image of the voyage usually presented derives from similar absences in the more specialised literature of Set A.

A SYMPTOMATIC PICTURE OF A WALLACEANA HISTORIOGRAPHY

This section is dedicated to analysing a part of the Wallaceana historiography. In order to have these specific sets of texts, I considered not only their direct or indirect reference to Wallace’s Amazonian voyage or to his anthropological thought, but also their relevance to the discussion. The criterion of relevance was based on bibliometric considerations, choosing the most cited among the works of greatest reference. The terms searched in order to classify the texts are Brazil, Amazon, Natives, Indigenous, Savages, Anthropology, Ethnology and Ethnography. The texts that evidence most of the references are the ones that will receive more reasonable considerations.

WORKS ON WALLACE’S ANTHROPOLOGICAL VIEWS THAT DEAL DIRECTLY/INDIRECTLY WITH AMAZONIAN ETHNOGRAPHY

Smith (1972), Kottler (1974), Degler (1991), Browne (1992), Camerini (1993), Seaward and Fitzgerald (1996), Fichman (2001), Knapp *et al.* (2002), Horta (2003), Smith (2004), Vetter (2006), Caso and Gutiérrez (2007), Moreira (2009), Ellen (2011), Kuklick (2011), Bickerton (2014) and Ferguson (2015) are part of Set C, which includes works that omit most or

all of the above-mentioned terms and/or do not articulate them mutually. For this reason, they have no utility for historiographical analysis, but illustrate how the absence in Set A of inquiries into Wallace's ethnographic data may reflect on the appropriation of the historical image of this scientific journey in other works that may seek to deal with it. Brotman (2001), Lyons (2009), Benton (2010), Lowrey (2010) and Flannery (2018) also compose Set C, but amidst the tending absence referred to allow to make brief notes.

Brotman (2001) has one of the few works dedicated to Wallace's connection with Victorian Anthropology, which has as material the naturalist's collected data and speculations regarding the human perceptions of sound. Lyons (2009), in turn, composes the narrow group of works about Wallace's evolutionary science in its relationship with Anthropology and Spiritualism, but just anticipating some questions responded more densely by Sera-Shriar (2018).

Benton (2010) brings Wallace's experiences with Amazonian and Malaysian² natives to the core of the debate with Darwin on human evolution and sexual selection. As for the Amazonians, he focuses only on Wallace's own impression of the people in a "state of nature". While Lowrey (2010) proposes a reading specifically on Wallace's legacy to British Anthropology, but the naturalist's interaction with Amazonian natives, unfortunately, consists of only a paragraph.

More recently, Flannery (2018), in one of his chapters, resumes the discussion about the recurrent disagreements between Wallace and Darwin concerning humankind in evolution. The allusions to the naturalist's field experience are limited to the journey in Malaysia and without connection between ethnographic productions and Ethnology, or Anthropology as scientific fields.

WORKS THAT DEAL INDIRECTLY WITH WALLACE'S AMAZONIAN JOURNEY

George (1964), Raby (2001), Fichman (2004) and Beccaloni and Smith (2008) compose Set B of the analysed historiography.

George (1964) elaborates explanatory schemes of the naturalist's main ideas and draws general pictures of the reception to his thought in the 20th century. The expeditions to Brazil and Malaysia are treated as a single block and although emphasising Wallace's studies about native languages, she restricts it to the material collected in the Asian islands from 1854.

Raby (2001) combined a good recovery of the naturalist's personal records with his letters, main texts and cross-sources from other scientists. The title he gave to Chapter Three,

"Apprenticeship on the Amazon", indicates exactly the interpretive model of the "failure" of Wallace's Amazonian voyage. It would not be a question of taking the term "apprenticeship" literally or not to consider that in fact, this journey was quite amateurish if compared to the expedition in Asia, but it would be important to point out how the repetition of this thesis reached the 2000s practically intact.

Fichman (2004) unleashed a series of articles that analyse specific dimensions of Wallace's thought, among them are his contacts with Natural Theology, Spiritualism and social reformist ideas. As for Wallace's passage in Brazil, the historian maintains a similar position to the previous ones, briefly exploring Wallace's contact with the natives, although no longer defending the thesis of the "failure" of this expedition.

The collection organized by Beccaloni and Smith (2008), having as subtitle "The Intellectual Legacy of Alfred Russel Wallace", undervalues his legacy to sciences such as Ethnology and Anthropology. Even in the texts in which Wallace's social and political thought are topically addressed, the connection of his ideas with these specific fields of 19th century science is left to the reader's own interpretation, limited by descriptions of the naturalist's achievements within the natural sciences. The only exception seems to be Ted Benton's chapter that describes Wallace's contacts with native groups, however, not proposing or indicating his contributions for the development of the British anthropological tradition.

WORKS THAT DEAL DIRECTLY WITH WALLACE'S AMAZONIAN JOURNEY

Beddall (1969), Ferreira (1990), Knaap (1999), Camerini (2001), Moreira (2002), Egerton (2012), Lima (2014), Van Wyhe (2014), Vetter (2010, 2015) and Hemming (2015) represent Set A of the selected historiography.

Beddall (1969) was one of the first to abandon monumental interpretations of the history of the evolutionary triad Darwin-Bates-Wallace. However, what she set out to do about the history of the Wallace-Bates' Amazonian expedition was basically to underreport its scientific results in relation to those from Wallace's Asian journey.

Ferreira (1990) does not extrapolate the "nucleus" of scientific discussion of the early Darwinian-Wallacean collaborations: varieties, mimetism, geographical distribution and migration. Thus, Wallace and Bates' observations and speculations concerning native groups from the Amazon basin are reduced to a superficial description of local characters highlighted in their narratives (Wallace, 1853; Bates, 1873), not seeming to imply for the theoretical project that Wallace began to delineate in the middle of the Amazon rainforest.

In Knapp (1999) there is not an integrated understanding of ethnography-scientific collecting-knowledge production, with the exception of Botany, her main topic. Wallace's ethnological propositions are not discussed and is noteworthy the *a priori* scission between scientific fields that underestimates the implication of these ideas for the theoretical groundwork for the theory of evolution by natural selection.

Camerini's (2001) aim is to systematise reading clues for those interested in knowing the most remarkable aspects of the naturalist's field experiences within the biological sciences. As for Wallace's dedication of his entire last trip in the Upper Rio Negro observing and recording the native groups, she only points out that his interest in native human populations was similar to his curiosity about insects and plants.

Moreira (2002) has importance because it highlights the process of knowledge construction linked to the exchange of information with natives, but reduces such collaboration to the scope of Botany and Zoology, without mentioning the scientific interest in the native groups themselves and in their ways of living. This view also applies to Egerton (2012), who articulates important aspects to reflect upon the natives' collaboration to theory development, although no reference is made to Ethnology or Anthropology in this work.

Lima (2014) presents the network of relations which Wallace used with a view to optimising his journey in the northern provinces of Brazil. The allusions to Wallace's ethnography are sparse and rather aim at pointing out the collection of "natural" data than the interaction itself as a part of the knowledge production in the areas of the study of man.

Van Wyhe (2014) brought up a controversial debate about the history of the Wallace-Bates joint expedition. His central aim is to put under evaluation the assertion that this voyage was thought and carried out under the conscious search for a solution to the problem of the origin of species. In addition to the view of this voyage only as a means of making a living, the author does not consider the implications of their joint work in increasing knowledge about interesting human groups for the British anthropological thought.

Jeremy Vetter systematically studied Wallace's Anthropology. Vetter (2010), which presents Wallace's tenuous relationship with Anthropology and Ethnology at the British learned societies, is a notable example. In this article, field experiences are defined as essential starting points, but his limitation is the almost inexistent data from the Amazonian voyage.

Hemming (2015) analyses the field work of the British triad Bates-Spruce-Wallace. A notable feature is the look he proposes about the interaction of these travellers with riparian indigenous groups and inhabitants of the deep Amazon forest. However, not taking this contact under the theme of Ethnology and Anthropology as scientific fields that have benefited

from the collecting along with the native populations, and as an intrinsic part of knowledge production in the 19th century Natural History.

In the works of Set C about which there were more themes to discuss besides absences, the analysis demonstrates how flagrant is the issue I seek to review. All of these are works that somehow direct their interests towards Wallace's conceptions and legacy to areas of knowledge closely related to the Anthropology and Ethnology from the 19th century, what further confirms the sharpness of the absence.

The undervaluation of the scientific inquiries into man states that the problem is not only broad and complex, but also recurrent. I take this problem, in part, as a longer reflection of misunderstandings about the history of scientific fields emerged from the late 18th century "epistemological shift", from which 19th century "sciences of man", such as Philology, Sociology, Psychology, History and Anthropology originated (Foucault, 1970).

The main of these misreadings is the relevance given to the argument of the "intrinsic reflexivity" of the human sciences as a criterion of demarcation with the natural sciences (Mazlish, 1998). This demarcation view leads to disregard that the "self-knowledge" that results from human sciences is what changes the subject, and not the "knowledge" itself that changes people and not nature (Smith, 2005). The opacity of fields such as 19th century Anthropology and Ethnology is a direct product of this demarcation argument, which imposes natural sciences as an interpretive model for the history of scientific fields mistakenly assumed to have proper forms of understanding only from the 20th century as academic disciplines.

CONCLUSIVE THOUGHTS

It is well known to historians of science that the hybrid condition of their discipline places them in difficult positions within the knowledge community. In the case of the history of the human sciences, this ground is even more contested because besides lacking a dominant narrative pattern, this field is located at the intersection of three others: History of science, Intellectual history, and History of ideas (Smith, 1997a: 23).

Many possible causes for the distance between historians *tout court* and the History of science have been raised and debated: the omission of historical literature about science in historians' academic formation; the restriction of historians' interest to scientific programmatic texts; the view of the histories of science and technology as a single process; the disputes as to whether the "nucleus" of science could be historically or sociologically comprehended; and an increasingly restricted pattern of expertise within knowledge fields (Gavroglu, 2007: 60-63; Kuhn, 1977: 132-151; Shapin, 1992).

According to Thomas Kuhn (1977: 158-161), all the causes could be confronted and even overcome with the progressive diversification and expansion of the History of science, although the central root of the problem would be hardly cut off. For him, the consolidation of the "two cultures" discourse is the fundamental basis of the major quarrel between the History of science and the Historical Studies.

With the changes that led to the construction of the scientific History in the 1930s under the *Annales'* model, historians began a quest to keep pace with the academic and social development of the natural sciences. In his reflections concerning the "humanisation of the humanities", historian François Dosse (2018) exemplifies how the process of *scientificisation* of History by the founding fathers of the *Annales* School distanced the field from science, at the same time that sought to take its new references from it.

Changes such as those occurring in Physics in the early 20th century were felt by historians, mainly by the shift of perspective regarding the "referent observer". But the direction that they took was towards the scientific models still under the principles of classical Physics, such as Durkheimian Sociology, thus leading to structuring and deterministic constraints in the view of science advanced among them (Dosse, 2018: 454-455).

This is exactly what Kuhn (1977: 157) refers to when he says that historians "too have tasted the forbidden fruit of the tree of knowledge". Not being the "unscientific" rhetoric of classical humanities interesting anymore, History defined itself as scientific, which would have made its role ambiguous in seeking to historicise sciences. Since History itself is one of the scientific disciplines, when historians are led to analyse past sciences, they feel a shift in their *métier*, as if they are swerving themselves to practices concerning Epistemology.

From the causes listed above, Steven Shapin (1992) draws attention to the debate between the views of the "nature of science" as being determined in a sociocultural way or epistemologically isolated from the surrounding context. For him, one of the most striking reverberations of the "two cultures" problem took place in the issue of "internalism/externalism", which marked the historiography of science until the late 1980s.

Being a debate that Shapin considers little seriously explored, its consequences would benefit from the crystallisation of the notions that guide the radical distinction between humanities and natural sciences in the academic behaviour. From the question of research funding to the literature offered in university courses, a massive influence of the "authority" of science could be perceived in a perspective very close to the Positivism from the early 20th century. Thus, instead of favouring integration among the fields, this influence would

fuel hostilities resulting from a vision of science embraced by the humanities, but today little defended by the scientists themselves.

According to Shapin (2010: 378), the major strongholds of “belief in the existence, coherence and power of the Scientific Method” are found in departments of the human sciences, not in those of the natural sciences. This assertion is not only corroborated by what I pointed out from Dosse (2018) about the constitution of the scientific foundations of History in the early 20th century, but also by other historians of science, such as Peter Dear (1995: 153), for whom internal inconsistencies in theoretical communication within historiography result from what he classifies as a “reestablishment” of the division internalism/externalism, this time under the old binary pair nature/culture.

Differently from the approach that the *Annales'* Scientific History maintained with Social Sciences in its objectivist and structuring perspective (Dosse, 2018: 305), the new historiography of science, resulting from the influence of Kuhn's theses upon British and French Sociology and Anthropology of Knowledge, renounced master narratives and turned increasingly to the particular and contingent. This turn made room in the historiography of science for the application of the “principle of symmetry” from the Bloorian Sociology of Scientific Knowledge, and later of the “generalized symmetry” principle from Bruno Latour and Michel Callon's Anthropology of Science (*Ibid.*: 441-442).

At this point that Shapin (1982) calls “sociological reconstruction” of the historiography of science, one finds clues to think of the possibilities of overcoming the opacity of the history of the human sciences in the specialised historiography, as well as its implication for the wide schism between History and History of science.

This movement would have fomented a radical historicism in the approaches to science, leading to the consideration of all agents in the development of scientific knowledge beyond the human (Dosse, 2018: 442). In the case of the human sciences, for which the human is both a means and an end, this radical historicism would produce approaches to past scientific ideas and actions through the terms of its own epoch, avoiding the application of Whiggish notions in the study of the history of these disciplines.

The prominence of ahistorical views about the humanities, largely as a result of the updating of Whiggish vices, has kept the double isolation of the history of the human sciences off the list of points to be highlighted in the debate regarding the distance between History and History of science. Taking into account that the history of sciences, such as Ethnology and Anthropology, have not hitherto held a prominent position in theoretical and historiographical

debates, it could emerge with less biased possibilities to reduce part of the distance between History and History of science.

Two main aspects can be mentioned in this regard. The first is that, for historians, the category "human sciences" is both "ahistorical" and describes a "strange" field located in a transdisciplinary space. This notion derives from the fact that, for History, its creative process is based on the act of finding within selected events narrative structures to explain them, whereas historians of science must impose a narrative form to its object of study. Thus, while History believes that the "verifiability" of its work is given by a "transparent" narrative construction and not by analyses of ideas and concepts, History of science engages directly with theory, since its own object is the reflexive construction of systems of sense (Smith, 1997a: 27).

The second is that the rejection of "disciplinary history" is a ground for historians' misunderstanding about science's historical dimensions. What they consider as amenable to historical analysis are science's "external" relations and not the "internal" ones that give it its own development, quite distinct from the general context. The exception seems to be solely the history of the arts, literature and music, with which historians have long been engaged. Thus, agreeing with Kuhn (1977: 152-155), historians' resistance would not be to science itself, nor to all kinds of disciplinary history, but only to those that require certain epistemological shifts.

The history of the human sciences exemplifies the way in which these two aspects are manifested. It would not be suggested that this field could lead historians to an actual approximation with History of science because its themes are more familiar than, for example, history of Physics or Chemistry, but by being academically established it would lead historians to overcome some barriers, which prevent them from acquiring a better understanding of the *métier* of historians of science and human sciences' own historicity.

One of the barriers results from the very constitution of the human sciences. Unlike the natural sciences, their "object" occupies a simultaneous place of "subject-object", being this ambiguity, for instance, denser in the case of Anthropology; and while studying its object, these sciences modify it by the very process of self-knowledge. Thus, the history of the human sciences would be a narrative of the human self-creation and a reflexive investigation not only about how the past human sciences studied "human nature", but also about how, at the same time of the quest to understand "human nature", these sciences change it radically (Smith, 1997b).

This operation would overcome the gap between "Academic History" (the voice of the past) and "Philosophical History", the self-reflexive voice with which we understand ourselves

as historical beings. According to Smith (1997a: 13), such a dichotomy has generated the division between writing history with and without theory punctuated earlier. This bipartition would derive from one of the dimensions of the consolidation of Academic History: the structuring of its method based on the strict notion of “diachrony”.

Rejecting “synchronic” analyses usually employed by disciplinary histories, which seek to understand relations between ideas, concepts, and theories contemporary to each other, History claims its share of “scientificity” conquered by notions such as “verified past” that would guarantee “neutrality” and “objectivity”. As Kuhn (1977: 156-157) pointed out, historians perceive their craft as similar to the sciences that History of science studies; sharing this “scientificity” would prevent them from accepting two preconditions for reducing the schism between the fields: that only by comprehending itself as “narrative” History could radically historicise science and that the history of the human sciences would lead historians to understand that this field, unlike the history of the natural sciences, is part of the very process of knowledge production in the sciences it studies. Therefore, to understand how the human sciences modified the “human” is to “denaturalise” the “human nature”, which humanities and social sciences take as their object.

The theme of the historiography about Wallace’s scientific voyage in the Amazon was taken as a pretext to illustrate and enrich the debate. As a scientist who produced knowledge in an integrated way in almost every scientific area, the historical literature about him clearly exemplifies how the history of the human sciences is perceived as a mere incorporation of the object - man - into the natural sciences. Having realized that the opacity of the history of Anthropology and other “sciences of man” from the 19th century implicates both historians and historians of science, the possibilities of dialogue multiply, since overcoming this absence would require a joint work of the entire historiographical community.

NOTES

1 As I will call from now on the texts that explore the life and work of the British naturalist. The term is used by the *Alfred Russel Wallace Fund* to designate a diverse set of objects, honours and species named after him.

2 Between 1854 and 1862, Wallace was on a second important scientific expedition, this time in the Malay Archipelago.

BIBLIOGRAPHY

- BATES, H. W. *The naturalist on the river Amazons: a record of adventures, habits of animals, sketches of Brazilian and Indian life, and aspects of nature under the Equator, during eleven years of travel*. Cambridge: Cambridge University Press, 2009.
- BECCALONI, G.; SMITH, C. (orgs.) *Natural selection and beyond: the intellectual legacy of Alfred Russel Wallace*. Oxford: Oxford University Press, 2008.
- BEDDAL, B.G. *Wallace and Bates in the tropics: an introduction to the theory of natural selection*. London: Collier-Macmillan, 1969.
- BENTON, T. Race, sex and the "earthly paradise": Wallace versus Darwin on human evolution and prospects. *Sociological Review*, London, v. 57, supl. 2, 2010.
- BICKERTON, D. *More than nature needs: language, mind, and evolution*. Cambridge: Harvard University Press, 2014.
- BROTMAN, C. Alfred Wallace and the anthropology of sound in Victorian culture. *Endeavour*, Amsterdam, v. 25, n. 4, 2001.
- BROWNE, J. A science of empire: British biogeography before Darwin. *Revue d'Histoire des Sciences*, Paris, v. 45, n. 4, 1992.
- CAMERINI, J. R. Evolution, Biogeography, and Maps: An Early History of Wallace's Line. *Isis*, Chicago, v. 84, n. 4, 1993.
- CAMERINI, J. R. (ed.). *The Alfred Russel Wallace Reader: a selection of writings from the field*. Baltimore: The Johns Hopkins University Press, 2001.
- CASO, J. M. R.; GUTIÉRREZ, R. R. The anthropological vision of Alfred Russel Wallace. *ISHPSSB Meeting*, University of Exeter, Exeter, July 27th, 2007.
- DEAR, P. Cultural History of Science: An Overview with Reflections. *Science, Technology, & Human Values*, v. 20, n. 2, Spring, 1995.
- DEGLER, C.N. *In search of human nature: The decline and revival of Darwinism in American Social thought*. New York: Oxford University Press, 1991.
- DOSSE, F. *O império do sentido: a humanização das ciências humanas*. São Paulo: Unesp, 2018.
- ELLEN, R. F. The place of the eolith controversy in the anthropology of Alfred Russel Wallace. *Linnean*, London, v. 27, n. 1, 2011.
- EGERTON, F.N. History of ecological sciences, part 41: Victorian Naturalists in Amazonia – Wallace, Bates, Spruce. *Bulletin of the Ecological Society of America*, Washington, v. 93, n. 1, 2012.
- FERGUSON, C. Other Worlds: Alfred Russel Wallace and Cross-Cultural Spiritualism. *Victorian Review*, Bloomington, v. 41, n. 2, 2015.
- FERREIRA, R. *Bates, Darwin, Wallace e a Teoria da Evolução*. Brasília: Editora UnB, 1990.
- FICHMAN, M. *An Elusive Victorian: The Evolution of Alfred Russel Wallace*. Chicago: University of Chicago Press, 2004.

FICHMAN, M. Science in Theistic Contexts: A Case Study of Alfred Russel Wallace on Human Evolution. *Osiris*, Chicago, v. 16, 2001.

FLANNERY, M.A. *Nature's Prophet: Alfred Russel Wallace and His Evolution from Natural Selection to Natural Theology*. Tuscaloosa: University of Alabama Press, 2018.

FOUCAULT, M. *The Order of Things*. London: Tavistock, 1970.

GAVROGLU, K. *O passado das ciências como história*. Porto: Porto Editora LDA, 2007.

GEORGE, W. *Biologist Philosopher: A study of the life and writings of Alfred Russel Wallace*. New York: Abelard Schuman, 1964.

HEMMING, J. *Naturalists in Paradise: Wallace, Bates and Spruce in the Amazon*. London: Thames & Hudson, 2015.

HORTA, M. R. A primeira teoria evolucionista de Wallace. *Scientiae Studia*, São Paulo, v. 1, n. 4, 2003.

KOTTLER, M. J. Alfred Russel Wallace, the origin of man, and spiritualism. *Isis*, Chicago, v. 65, n. 2, 1974.

KNAPP, S. *Footsteps in the Forest: Alfred Russel Wallace in the Amazon*. London: Natural History Museum, 1999.

_____. et al. Alfred Russel Wallace and the Palms of the Amazon. *Palms, The Hills*, v. 46, n. 3, 2002.

KUHN, T. S. *The essential tension: Selected Studies in Scientific Tradition and Change*. Chicago/London: Chicago University Press, 1977.

KUKLICK, H. Personal Equations: Reflections on the History of Fieldwork, with Special Reference to Sociocultural Anthropology. *Isis*, Chicago, v. 102, n. 1, 2011.

LIMA, Carla. *A experiência de campo de Alfred Russel Wallace na Amazônia oitocentista: viagem, ciência e interações*. Tese (doutorado em história das ciências e da saúde) – Casa de Oswaldo Cruz / Fundação Oswaldo Cruz, Rio de Janeiro, 2014.

LOWREY, K. B. Alfred Russel Wallace as ancestor figure: Reflections on anthropological lineage after the Darwin bicentennial. *Anthropology Today*, London, v. 26, n. 4, 2010.

LYONS, S. L. *Species, Serpents, Spirits and Skulls: Science at the Margins in the Victorian Age*. Albany: Suny Press, 2009.

MAZLISH, B. *The Uncertain Sciences*. New Haven/London: Yale University Press, 1998.

MOREIRA, I. C. O escravo do naturalista: o papel do conhecimento nativo nas viagens científicas do século 19. *Ciência Hoje*, São Paulo, v. 31, n. 134, 2002.

_____. Darwin, Wallace, a seleção natural e o Brasil. *Revista Princípios*, São Paulo, n. 101, 2009.

RABY, Peter. *Alfred Russel Wallace: A Life*. London: Chatto&Windus, 2001.

SHAPIN, S. History of science and its sociological reconstructions. *History of Science*, n. 20, 1982.

_____. Discipline and bounding: The history and sociology of science as seen through the externalism-internalism debate. *History of Science*, n. 30, 1992.

_____. *Never Pure: Historical Studies of Science as If It Was Produced by People with Bodies, Situated in Time, Space, Culture, and Society, and Struggling for Credibility and Authority*. Baltimore: JHU Press, 2010.

SEAWARD, M. R. D.; FITZGERALD, S. M. D. (orgs.). *Richard Spruce (1817-1893): botanist and explorer*. Kew: Royal Botanic Gardens, 1996.

SERA-SHRIAR, E. Credible witnessing: Alfred Russel Wallace, spiritualism, and a "new branch of anthropology". *Modern Intellectual History*, Cambridge, July 1-28th, 2018. (Published Online).

SMITH, C. Alfred Russel Wallace on Man: A Famous "Change of Mind" Or Not? *History and Philosophy of the Life Science*, Exeter, v. 26, n. 2, 2004.

SMITH, R. Alfred Russel Wallace: Philosophy of Nature and Man. *British Journal for the History of Science*, Cambridge, v. 6, n. 2, 1972.

_____. History and the history of the human sciences: what voice? *History of the Human Sciences*, London, v. 10, n. 3, 1997a.

_____. *The Norton History of the Human Sciences*. New York: W. W. Norton, 1997b.

_____. Does reflexivity separate the human sciences from the natural sciences? *History of the Human Sciences*, London, v. 18, n. 4, 2005.

SNOW, C.P. *The Two Cultures*. London: Cambridge University Press, 1959.

VAN WYHE, J. A Delicate Adjustment: Wallace and Bates on the Amazon and "The Problem of the Origin of Species". *Journal of the History of Biology*, Basel, v. 47, n. 4, November 2014.

VETTER, J. Wallace's Other Line: Human Biogeography and Field Practice in the Eastern Colonial Tropics. *Journal of the History of Biology*, Basel, v. 39, n. 1, 2006.

_____. The unmaking of an anthropologist: Wallace returns from the field, 1862-70. *Notes and Records of The Royal Society*, London, v. 64, n. 1, 2010.

_____. Politics, Paternalism, and Progressive Social Evolution: Observations on Colonial Policy in the Scientific Travels of Alfred Russel Wallace. *Victorian Review*, Bloomington, v. 41, n. 2, 2015.

WALLACE, A. R. *A Narrative of Travels on the Amazon and Rio Negro: With an Account of the Native Tribes and Observations on the Climate, Geology, and Natural History of the Amazon Valley*. Cambridge: Cambridge University Press, 2010.