

Title:

Art in Translation: *PARCHMENT, PARCHEMIN, PERGAMENT, PERKAMENT, PERGAMENA...*
2021, Issue 13.4

Abstract:

Art in Translation (AIT, www.artintranslation.org) is a quarterly e-journal that publishes scholarly art historical texts in English translation. It was launched in 2009 with funding from the Getty Foundation and is hosted by the University of Edinburgh. Issue 13.4 (2021) features four texts about parchment and marks AIT's inaugural foray into *technical* art history. The works, authored between the eighteenth and twentieth centuries, were penned by authors possessing either comprehensive *theoretical* knowledge or direct *practical* experience. Jérôme de Lalande's 1762 *Art de faire le parchemin* is the longest and oldest of the texts and its translation is the definitive highlight of the parchment issue. de Lalande is followed by Wilhelm Wattenbach's exploration on parchment, excerpted from his 1896 revision of *Das Schriftwesen im Mittelalter*. Finally, two essays from Peter Rück's 1991 volume - *Pergament: Geschichte · Struktur · Restaurierung · Herstellung*, will be presented in English, both of which convey vivid accounts of mammalian skin and its transformation into parchment: Zeger Hendrik de Groot's *Die Herstellung von Goldschlägerhaut, transparentem und gespaltenem Pergament* and Gerhard Moog's *Häute und Felle zur Pergamentherstellung: Eine Betrachtung histologischer Merkmale als Hilfe bei der Zuordnung von Pergamenten zum Ausgangsmaterial*. The selection of texts was informed by conservation and biocodicology experts. The translations were completed by Gay McAuley, Andrew Griebeler, and Caroline Danforth with considerable feedback and assistance from a variety of experts. Collectively, these translations make fascinating and significant works about parchment's history, manufacture, and use more accessible for generations to come.

Keywords:

Parchment, de Lalande, vellum, goldbeater's skin, translation

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Making Parchment Accessible through Translation

Literacy, the fundamental cornerstone of learning, promises to unlock untold avenues of inquiry. Multilingualism, however, has the potential to liberate *galaxies* of human thought. *More* is unequivocally *better* when it comes to language fluency. Who among us, however, can claim to be a polyglot? All too often, the ambitious scholar's progress is stymied when an obviously invaluable publication is unearthed, yet penned in an unfamiliar language, rendering its messages painfully inaccessible. These occurrences evoke unparalleled vexation and can result in the exclusion of salient sources.

While achieving reading fluency in several languages remains a noble ambition, one solution for the art historical community exists: *Art in Translation* (AIT: www.artintranslation.org). Founded in 2009 by Iain Boyd Whyte with support from the Getty Foundation and hosted by the University of Edinburgh, AIT publishes a quarterly e-journal in which scholarly texts concentrating on the visual arts, architecture, and design are presented in English translation.

Recently, AIT embarked upon its maiden voyage into the realm of *technical* art history to focus on the most sensuous of materials, namely: parchment (here, *parchment* is used as an umbrella term to include vellum). AIT's parchment issue (2021, 13.4) includes four texts, written between the eighteenth and twentieth centuries, that focus on the history, materiality, manufacture, and trade of this faunal substrate.

The task of translating these texts was at times circuitous and often punctuated by troublesome terminology that threatened to delay progress. The translators worked in concert with tremendously generous conservators, parchment makers, and linguists while taking full advantage of the plethora of digitized resources available online. Below, the project's evolution is described, each of the four texts summarized, several of the more

perplexing words and phrases expounded upon, and the resources by which English equivalents were determined, shared. Collectively, these undertakings reflect the expertise and voices of the original authors as well as the tireless efforts on the part of many kindred spirits who contributed to their translation.

From One Text to Four

The AIT parchment project began in 2018 when *one text* was proposed for translation. However, Iain Boyd Whyte's foresight and imagination transformed the initial single translation into an entire *issue* dedicated to parchment. With a 40,000 word limit, the process of curating a complementary, thematically unified, and intellectually compelling selection from the seemingly endless possibilities began.

The initial idea was to glean essays exclusively from those published in Peter Rück's *Pergament: Geschichte · Struktur · Restaurierung · Herstellung* (Rück, 1991). It seemed prudent, however, to solicit the advice of the many experts who had attended the 2019 symposium *Biocodicology: The Parchment Record and the Biology of the Book* at the Folger Shakespeare Library. Abigail Quandt (Senior Conservator of Manuscripts and Rare Books - The Walters Art Museum), Jiří Vnouček (PhD, Conservator of Parchment, Paper, and Books, Royal Danish Library; Research Fellow: ERC Beasts to Craft Project), Matthew Collins (Niels Bohr Professor University of Copenhagen / McDonald Professor of Palaeoproteomics University of Cambridge), and Nancy Turner (Conservator of Manuscripts, Department of Paper Conservation, J. Paul Getty Museum) all generously offered their expert guidance during the selection process.

The Final Selection of Texts

Jérôme de Lalande: *Art de faire le parchemin*, 1762

Translated by Gay McAuley

Dr. Jiří Vnouček proposed Jérôme de Lalande's *Art de faire le parchemin* for translation and also reviewed drafts thereof, responding with thoughtful and invaluable feedback (de Lalande, 1762). de Lalande was an 18th century French astronomer, writer, and member of the French *Académie royale des sciences*. In the 1760s, the *Académie* began publishing serial brochures entitled *Descriptions des arts et métiers*. Each brochure reported on a single craft, thereby capturing the labor-intensive undertakings of pre-industrialized France for social and scientific benefit. de Lalande contributed nine texts about paper and skin materials. His *Art de faire le parchemin* provides a meticulous examination of parchment's materiality, the impact that seasonal variations had on its manufacture, the use of derivative products, and regulations governing the French parchment trade. de Lalande's detailed descriptions made the merit of its full translation immediately evident and its adoption swift and indisputable.

Wilhelm Wattenbach: *Das Schriftwesen im Mittelalter - Pergament*, 1896

Translated by Caroline Danforth (German) and Andrew Griebeler (Greek and Latin)

After committing to de Lalande's treatise, a second historical text was chosen, albeit 100 years younger: Wilhelm Wattenbach's section on parchment from his 1896 revision of *Das Schriftwesen im Mittelalter* (Wattenbach, 1896). Wattenbach, a German historian and paleographer, authored this oft-referenced volume which provided a ground-breaking and inaugural examination of medieval writing. Parchment's history, trade, and terminology is addressed in his chapter on writing surfaces. The closing passages about purple parchment colored with the glandular secretions of the sea snail are particularly engaging (Wattenbach, 1896: 132-139). Throughout, Wattenbach interweaves relevant citations from city registers, libraries, receipts, tax records, letters, monastic orders, and poems. These references create the framework around which he builds his examinations of paleographical materials.

Zeger Hendrik de Groot: *Die Herstellung von Goldschlägerhaut, transparentem und gespaltenem Pergament*, 1991

Translated by Caroline Danforth

Both de Lalande and Wattenbach possessed indirect knowledge of parchment manufacture. To complement their historical and theoretical texts, two twentieth century essays, written by authors with deep first-hand experience, were chosen. Zeger Hendrik de Groot's essay, *Die Herstellung von Goldschlägerhaut, transparentem und gespaltenem Pergament*, is one of thirty-four compiled in Peter Rück's *Pergament: Geschichte · Struktur · Restaurierung · Herstellung* (de Groot, 1991: 373-380). De Groot's entry offers practical, illustrated instructions for producing three types of specialized skin/membrane products: goldbeater's skin, transparent parchment, and split parchment. Following a decade of research and experimentation with medieval recipes, de Groot's essay summarizes the materials and methods required to reproduce the unique types of parchment he created.

Gerhard Moog: *Häute und Felle zur Pergamentherstellung: Eine Betrachtung histologischer Merkmale als Hilfe bei der Zuordnung von Pergamenten zum Ausgangsmaterial*, 1991

Translated by Caroline Danforth

Gerhard Moog's report on the histological identification of animal species is the second text from *Pergament: Geschichte · Struktur · Restaurierung · Herstellung* (Rück, 1991). As a master tanner and decades-long lecturer at the renowned Lederinstitut Gerberschule Reutlingen, Moog draws on his extensive practical experience to pen *Häute und Felle zur Pergamentherstellung* (Moog, 1991: 171-181). He describes raw skin's diverse features and elucidates visual indicators such as sheet size, follicular arrangement, pore size and shape, veining, and scarring, all of which can provide insights into a skin's original appearance and aid in its species identification. Moog's familiarity with skin's versatility allows him to portray the broad variation found among sheets of parchment and the raw skins from which they were crafted.

The Process of Translation: Translators - Specialists - Linguists - Literature

The process of translation began with broad strokes that progressively honed in on individual terms requiring deeper examination. These words were evaluated with input from conservators, parchment makers, historians, scientists, and native speakers of the source language. Digitized glossaries and multilingual dictionaries focusing on animal skin, occupations of bygone eras, and the leather industry proved invaluable. As anyone working with parchment knows, inconsistent application of parchment terminology is widespread even among specialists and practitioners. Consequently, there were several occasions when a single English word could not be identified for a particular technical term, which led the translators to use paraphrases or descriptions. However, the etymological probe into dozens of terms, including the sampling provided below, was enlightening and gratifying.

Translating Tricky Terminology: Some Examples

Jérôme de Lalande: *Art de faire le parchemin*

Mégissier = Whittawyer (*whittawer, whitawer*)

de Lalande uses the word *mégissier* for the worker who carries out the first stages of transforming skin into parchment: washing, liming, de-hairing, additional washing, and further soaking in lime pits (de Lalande, 1762: 4). These steps are distinguished from those of the *parcheminier* (= parchment maker, parchmener) who completes the process. de Lalande explains that a *mégissier* is a tradesman who treats small skins with lime, unlike tanners who use bark and chamoisiers who generally use oil. A *mégissier* is associated with both parchment and white leather. de Lalande's account describes the tasks falling within the parameters of a *mégissier's* bailiwick as well as those of the *parcheminier*.

Fellmonger (*fell* = skin or hide; *monger* = dealer) was initially considered as an English equivalent. A *fellmonger* deals in small hides or skins, in particular sheepskin (Abigail Quandt, The Walters Art Museum, Baltimore, Maryland, 2020, personal communication, 7 December). However, comparison with Johann Heinrich Gottlob von Justi's 1763 German translation of *Art de faire le parchemin*, *Die Kunst Pergament zu Machen*, diverged from *fellmonger* and shed light on other possibilities (de Lalande translated by Justi, 1763: 6). Justi translates *mégissier* as *Weißgerber* (*weiß* = white; *Gerber* = tanner). Some (but not all) multilingual dictionaries, such as Christoph Friedrich Grieb's *English and German - German and English* dictionary, equate *Weißgerber* with *whittawyer* (Grieb, 1907: 1276).

Several conservators confirmed the best English term for *mégissier*. Alexis Hagadorn's beautifully distilled account of de Lalande's treatise (among others) in *Parchment making in eighteenth-century France: historical practices and the written record* uses *whittawyer* for *mégissier* (Hagadorn, 2012: 167). Abigail Quandt agreed that *whittawyer* is the best term, adding that alum-tawed skins are called *peau mégisse* in French (Abigail Quandt, The Walters Art Museum, Baltimore, Maryland, 2020, personal communication, 7 December). Élodie Lévêque agreed that in France, *whittawyers* and *mégissier* are synonymous and that this worker prepares skins for both parchment and tawed dermal membranes (Élodie Lévêque, National Library of Ireland, Dublin, Ireland, 2021, personal communication, 19 March).

Boudines = Belly

A diagram of stretched animal skin appears at the end of de Lalande's work. This diagram identifies areas at the central left and right edges as *boudines* (de Lalande, 1762: 15, 47). de Lalande writes that, strictly speaking, *boudines* refer to male genitalia. However, these regions are also associated with the underbelly. Justi's German translation corresponds with de Lalande's: *the upper belly, reproductive parts or outermost parts of the skin, connected to the underbelly* (de Lalande translated by Justi, 1763: 54). Not surprisingly, this reference to farmyard reproductive organs elicited doubt and wonder. de Lalande consulted with parchment makers to write his report and in employing the word *boudines*, was simply capturing the words commonly used in French workshops.

Paul Wright of William Cowley Parchment Makers reviewed de Lalande's diagram and identified the *boudines* as the underbelly region (de Lalande, 1792: Plate 1; Paul Wright, William Cowley Parchment Makers, Newport Pagnell, England, 2021, personal correspondence, 1 February). He explained that excess parts are cut away early in the process, including genitalia, the udder, at times the tail, etc. de Lalande, however, retained the tail in his diagram, an interesting detail that makes one wonder if it was actually present in the stretched skins he observed. Today, some parchment makers retain the tail during stretching as it provides yet another area with which to attach a stretching clamp (Jesse Meyer, Pergamena, Montgomery, New York, 2021, personal correspondence, 24 May). Calf tails are invariably removed following slaughter and are not present during stretching since their meat can be transformed into oxtail soup; the short tails of goats do not meet culinary rebirth and are eventually removed by the parchment maker, sometimes as soon as the skin has been stretched (Paul Wright, William Cowley Parchment Makers, Newport Pagnell, England, 2021, personal correspondence, 27 May). Élodie Lévêque shared that in Old French, *boudine* means the *belly button area*, referencing the online *Dicocitations Le Dictionnaire des Citations* (Dicocitations, 2021); Élodie also explained that in the Ardennes region *boudine* means *belly* while in Picardie, it means *navel* (Élodie Lévêque, National Library of Ireland, Dublin, Ireland, 2021, personal communication, 2 February). In Denis Muzerelle's *Vocabulaire codicologique*, the *boudine* is the area of the skin corresponding with the belly (Muzerelle, 1985: 123).

Brisets = Axilla

The *brisets* are regions de Lalande identifies as the thinner skin under the forelegs (de Lalande, 1762: 15, 47). While this description was comprehensible, choosing the correct term was not straightforward. This is a case where English practitioners do not seem to have a single-word equivalent. Marilena Maniaci's *L'art de ne pas couper les peaux en quatre* includes an illustration depicting areas of weaker, thinner skin, referring to them as *brisets* (Maniaci, 1999: 4). However, these areas occur under all four legs in her diagram, not only the forelegs as de Lalande describes. Tolhausen's *Technologisches Wörterbuch* translates *brisets* as *Achselhaut* which means *armpit skin* (Tolhausen, 1908: 36). Justi also uses *Achselhaut* in his German translation of de Lalande's text (de Lalande translated by Justi, 1763: 54). Paul Wright of William Cowley Parchment Makers uses *back of foreleg* for the armpit region of the forelegs (Paul Wright, William Cowley Parchment Makers, Newport Pagnell, England, 2021, personal correspondence, 1 February). Muzerelle's *Vocabulaire codicologique* defines *briset* as the skin located at the junction of the flanks and shoulders or hips, corresponding to the animal's armpits (Muzerelle, 1985: 123). Animals do not have arms but forelegs and de Lalande describes *brisets* as relating to the forelegs alone. Therefore, *axilla* is the word that best approaches *brisets*, even if it is not a term used by English-speaking parchment makers.

Écharner, Charnure, Écharnure, = To Flesh, Fleshings/Parings, Skinner's Wool,

Three terms used in de Lalande's text relate to the flesh attached to a flayed animal's skin (de Lalande, 1762: 17, 28, 46). *Écharner* is the verb meaning *to flesh* or *de-flesh*, in other words, to remove the scraps of muscle and other tissue from a skin. An affiliated word, *charnure*, is the proteinaceous detritus, *fleshings* or *parings*, removed from a skin. This material should *not* be made into glue since it does not consist of pure dermal material alone, but fleshy remnants that would spoil adhesive made from it. *Écharnure*, another related term, is described by de Lalande as the best quality wool acquired from the chest and shoulders of sheep, known as *skinner's wool* or *Schabewolle* in German (de Lalande, 1762: 10). This material is not to be confused with the wool shorn from a living sheep. The difference between the words *charnure* and *écharnure* was surprising since the first is associated with detritus not even worthy of glue, while the latter refers to the best quality wool.

Wilhelm Wattenbach: Das Schriftwesen im Mittelalter

Flua / Flueerde = Runs, Flows

One of the many passages Wattenbach uses to support his points is excerpted from a fourteenth century French-Flemish dictionary, edited by Henri Michelant: *Le livre des mestiers* (Wattenbach, 1896: 129; Michelant, 1875). These lines demonstrate the need to avoid parchment that could *flow* or *run*; in other words, parchment upon which the ink would not stay put but would pool upon its surface. In the French version, the term is *flua* while in Flemish it is *flueerde*.

Ysabiaus de Rolers / Vend perkemin / Et elle m'en vendi / Une piel qui flua; si n'i puis / mien bien escripre: / Il le faut esponseir; / Si en sera plus onnie.

Ysabiaus de Roesselaere / Vercoopt perkement / Ende soe vercoopts mi / Een vel dat flueerde; so dat ic / ne macher / Niet wel in scriven. / Men moet det ponsen; / Het worter of te slichter.

Ysabiaus of Roeselare sells parchment and she sold me a skin that runs, and I could not write well upon it; one must smooth it with a pumice stone, and it will be more even.

Initially, *flua/flueerde* was mistakenly translated as *bleed* since it seemed that perhaps the ink was penetrating the flawed parchment's surface and spreading. Paul Wright of William Cowley Parchment Makers described the qualities of parchment that *runs* or *flows*, explaining that sheepskin begins as a rather fatty material (Paul Wright, William Cowley Parchment Makers, Newport Pagnell, England, 2021, personal correspondence, 5 February). As the skin is transformed into parchment, care must be taken to work most *but not all* of the oils from the skin. If too much oil is removed, the parchment becomes dry and brittle. A skilled parchment maker can recognize when the correct amount of oil has been achieved, perceiving this threshold by the color and smell of the extracted oily liquor. If improperly prepared, excess oils can leach out and create a fine film on the surface that takes ink poorly. It is akin to trying to inscribe grease paper. A bit of pumice can remedy this problem by absorbing the thin, greasy layer. In *The Nature and Making of Parchment*, Ronald Reed also references this passage, but not in its entirety as Wattenbach did (Reed, 1975: 79). Maaïke Hogenhout-Mulder's *Cursus MiddelNederlands* includes the Flemish version and defines *flueerde* as *vloeien*, meaning *to flow* (Hogenhout-Mulder, 1983: 18). With this evidence in hand, the appropriate English term was deemed *run* or *flow*.

Francijn = French Parchment

Wattenbach addresses a type of parchment called *francijn*, noting that it was made from sheepskin (Wattenbach, 1896: 118-119). This word, variously spelled as *fransijn*, *fronsijn*, *froncenium*, *fronseyn*, *franchijn*, *fronchijn*, *forchijn*, *frontsijn*, and *frotsijn* is the Dutch term for French parchment. One of Wattenbach's footnotes references to Oudemans' *Bijdrage tot den Middel-en Oudnederlandsch Woordenboek* which identifies *francijn* simply as *Fransch perkament = French parchment* (Wattenbach, 1896: 119; Oudemans, 1871: 325). From this straightforward translation, Wattenbach concluded that *francijn* was no more precious than "typical" parchment. Ewoud Sanders and Jaap Engelsman's entry on parchment in *Geoniemen Woordenboek* describes *francine* as refined parchment from France, explaining that this material was also used for lace patterns in the southern Netherlands (Sanders and Engelsman, 1996: 179). The entry for *fransijn* in the *Historische woordenboeken*;

Nederlands en Fries indicates that the Flemish stamped this name upon parchment imported from France (Instituut voor de Nederlandse taal, 2021). Given that these sources agreed with French origins, *French parchment* was chosen as the English equivalent. Henriette Rahusen was incredibly helpful in unearthing the sources that illuminated the meaning of this term (Henriette Rahusen, National Gallery of Art, Washington, DC, 2021, personal communication, 26 January).

Zeger Hendrik de Groot: Die Herstellung von Goldschlägerhaut, transparentem und gespaltenem Pergament

Blinddarm = Caecum

The German term *Blinddarm* is commonly translated as *appendix*. In the case of cows, however, a different word had to be chosen. Science Daily published the article *Appendix Isn't Useless At All* in which humans, rabbits, opossums, and wombats are described as the only mammals known to have appendices (Duke, 2007). Therefore, *appendix* could not be applied to de Groot's text which describes the bovine *Blinddärme* (de Groot, 1991: 373, 377). De Groot describes the membrane that is used to make goldbeater's skin - the outer layer of a cow's *blind intestine*, which is also known as the *caecum*. It is the pouch that is connected to where the small and large intestine meet, close to where an appendix would be in a human.

Eau de Javelle = Javelle Water (bleach, sodium hypochlorite)

De Groot describes *eau de Javelle* as sodium hypochlorite, an alkaline liquid that was manufactured near Paris and sold to laundresses at a modest price (de Groot, 1991: 377). While making goldbeater's skin, it can be added to the water in which de-greased bowels are soaked. This additive eliminates malodor and eases the removal of membranes. Merriam-Webster defines *Javelle Water* as *an aqueous solution of sodium hypochlorite used as a disinfectant or a bleaching agent* (Merriam-Webster Online Dictionary, 2021). The book *Sulphuric Acid; Alkalies and Hydrochloric Acid; Manufacture of Iron; Manufacture of Steel* describes it as being made at Javel, near Paris, after which the substance is named (*Sulphuric Acid*, 1902: 8). Paul May and Simon Cotton's *Molecules that Amaze Us*, summarizes the development of liquid bleaching agents, naming Claude Louis Berthollet's 1785 invention in the village of Javelle, *liqueur de Javel* (May and Cotton, 2014: 445). While the village of Javelle has been absorbed by Paris, the term *eau de Javel* is still used for *bleach*.

Gerhard Moog: Häute und Felle zur Pergamentherstellung

Aasseite = Flesh side

Although determining the English equivalent for *Aasseite* was swift, the term's origins are sufficiently interesting to warrant sharing (Moog, 1991: 172). *Aasseite* is synonymous with *Fleischseite* or *flesh side*. Walter Freudenberg's *Internationales Wörterbuch der Lederwirtschaft*, a multilingual dictionary focusing on the leather industry, provides a clear translation for *Aasseite* which is confirmed in Tolhausen's *Technologisches Wörterbuch: flesh side* (Freudenberg, 1968: 15; Tolhausen, 1908: 1). A 1854 publication, *Deutsches Wörterbuch*, defines *Aas* as *dead flesh* or *cadaver* (Grimm, Grimm, Heyne, Hildebrand, Lexer, and Weigand, 1854: 6). *Aas* is also related to the German word *essen*, or *to eat*. Therefore, the *Aasseite* is the side of carion that would have been eaten, i.e. the *flesh side*.

Fläme = Axilla (Shank)

Fläme is German for an animal's *axilla*. The *Fläme*, according to Moog, appear as *four* palm-sized regions at the edges of a parchment sheet (Moog, 1991: 176). In other words, they are associated with *each* of an animal's four legs. In French, de Lalande uses *brisets* for *axilla*, but reserves this term for the forelegs alone. Maniaci, however, uses *brisets* for the *axilla* of all four legs, just as Moog uses *Fläme* (Maniaci, 1999: 4). Regardless, these passages tend to be somewhat darker, thinner, and more translucent than other areas of a skin. It appears that some parchment and leather makers have specialized terms to distinguish the *axilla* of the forelegs from the *axilla* of the hindlegs. Thomas Schmidt uses *Vorderfläme* for the *axilla* of the forelegs (which he refers to as the *flank*) and *Hinterfläme* for the hind-leg's *axilla* (hind-flank) (Thomas Schmidt, Firma Franz Hoffmann- Feinleder, Stuttgart, Germany, 2021, personal communication, 13 February). The front side of the forelegs is called the *Vorderklaue* (fore-shank) and the back of the hindleg is the *Hinterklaue* (hind-shank). Again, the employed terminology varied considerably between practitioners. Regardless of which leg a *Fläme* is associated with, it always corresponds to

a thinner region found alongside the inner part of an animal's leg.

Conclusion

Regardless of preservative efforts on the part of humans, parchment tenaciously retains attributes of its mammalian origins and often demonstrates its desire to return to its original shape. The more conservators, art historians, medievalists, and artists can fortify their understanding of parchment's history, anatomy, manufacture, and distinct characteristics, the more effectively and sensitively will they succeed in safeguarding it in perpetuity. Through the translation of four diverse texts about parchment, the intelligence held therein is rendered exponentially more accessible. Just as de Lalande's *Académie royale des sciences* understood the benefit of expanding knowledge for social and scientific advancement, so, too, does AIT make scholarship more broadly available. de Lalande's ambitious undertakings recorded in his contributions to the *Descriptions des arts et métiers*, Wattenbach's in-depth investigation into medieval palaeography, and de Groot's and Moog's deep modern understanding of mammalian skin shall now experience expanded reach. AIT's special parchment issue serves as an homage to the collective contributions these authors made to our understanding of the ever-enduring *parchment*.

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I owe an enormous debt of gratitude to Jiří Vnouček for recommending de Lalande's text, dedicating considerable time to reviewing drafts of its translation, and providing bountiful and invaluable insights. Abigail Quandt, Matthew Collins, and Nancy Turner enthusiastically weighed in on the selection of texts to translate for which I am eternally thankful. Parchment makers Jesse Meyer of *Pergamena* and Paul Wright of *William Cowley Parchment Makers* were enormously helpful in clarifying specialized terminology regarding tools and dermal anatomy. I was also exceedingly fortunate that Zeger Hendrik de Groot was willing and available to review my translation of his text. I am most grateful for the linguistic guidance imparted by Claire Chahine and Élodie Lévêque regarding French expressions specific to eighteenth century parchment. Thomas Schmidt of Firma Franz Hoffmann- Feinleder, Stuttgart for providing German terms for parts of a stretched animal skin.

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Bio:

Caroline Danforth was born in the UK and grew up bilingual (German and English) in the United States. She studied fine art, art history, and German literature at Mary Washington College, supplementing her education with a year each at the Ludwig Maximilians University in Munich and Eberhard Karls University in Tübingen, Germany. In 2004, she received an MFA in painting from The George Washington University. For five years, Caroline worked for Arlington, Virginia's Public Art Program, two of which included part-time work at The Phillips Collection. Since 2008, she has worked as a preservation framer of prints, drawings, and photographs at the National Gallery of Art in Washington, DC. Caroline's research interests include the history and manufacture of parchment, German to English translation, German paleography, and the Poor Clares of late medieval Germany.

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