

Tattooed Human Mummies Database, Version 6.0

DOI 10.6084/m9.figshare.5738439

Aaron Deter–Wolf, <Aaron.Deter-Wolf@tn.gov>

Distributed under Creative Commons License [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/).

Suggested citation:

Deter–Wolf, Aaron (2023) Tattooed Human Mummies Database, Version 6.0 [data file]. Figshare.
<https://dx.doi.org/10.6084/m9.figshare.5738439>

The following presents a global data set identifying naturally- and deliberately preserved tattooed human remains from the archaeological record. The initial version of this list (Version 1.0) was compiled in 2016 for inclusion as Table 1 in the journal article [“The World’s Oldest Tattoos” \(Deter-Wolf et al. 2016\)](#). Benoît Robitaille, Lars Krutak, and Sébastien Galliot all contributed to that initial effort. Changes between versions are detailed below.

Entries in the data table are organized broadly by date, and rely on direct dating wherever possible. Where radiocarbon data is available, dates represent calibrated ranges. Each entry also includes documentation as to the associated archaeological culture, site, and significant source material. Citations are not comprehensive. At the present time, historical European examples, unpublished and/or unprovenienced specimens from museums and private collections, and deliberately-preserved historical skin samples are not generally included in the data set.

Changes for Version 6.0 (2023)

- Added new citations for Egypt, the Andes, and western China; improved citations for these regions
- Removed entries for Temrta III and Primorsky I (Shishlina et al. 2013) per research by Lorkiewicz-Muszynska et al. (2018)
- Improved hyperlinks for source material
- A visual presentation of this data is now available as an ArcGIS StoryMap: <https://arcg.is/OLS89e0>

Changes for Version 5.0 (2022):

- Grouped previously separate entries for Huacho cemeteries, Los Pinos, and Cerro Colorado
- Improved hyperlinks for source material
- Updated title from “Tattooed Human Mummies, List Version XX” to “Tattooed Human Mummies Database, Version XX”
- Added maps

Changes for Version 4.0 (2021):

- Citations added
- New entries for Andes and Hawaii
- Reorganized Andean entries to account for unprovenienced examples
- Collapsed single site entries except where dates differ
- Improved hyperlinks for source material

Changes for Version 3.0 (2019):

- Citations improved
- New entries for additional Andes and Egypt
- Added hyperlinks for source material

Changes for Version 2.0 (2017):

- Deleted “Loulan Beauty” from Gumugou, Qäwrighul, China, who is not tattooed.
- Updated Egyptian data per Friedman (2017:Table 1)
- Improved citations and corrected date ranges as necessary
- New entries for Timbac Rockshelter and Andes

Tattooed human mummies, with associated cultures, sites, and dates.

Date	Culture	Country	Site	Identifiers/Collections/Comments	Sex	Sources
3370–3100 BCE	Tamins–Carasso–Isera 5	Italy	Tisenjoch	Ötzi	M	Capasso 1993; Dorfer et al. 1998, 1999; Pabst et al. 2009; Samadelli et al. 2015; Sjøvold 2003
3349–3093 BCE; 3340–3018 BCE	Predynastic	Egypt	Gebelein	BM EA32752; BM EA32751	F/M	Friedman 2017; Friedman et al. 2018
2563–1972 BCE	Chinchorro	Chile	El Morro	Mo–1 T28 C22	M	Arriaza 1988; Deter-Wolf et al. 2016
2055–2004 BC	Dynasty XI (Nebhepetre Mentuhotp II)	Egypt	Deir el-Bahari, Thebes	Amunet, Pit 23, Pit 26	F	Fouquet 1898; Keimer 1948; Winlock 1923
1985–1955 BCE	Dynasty XII (Amenemhet I?)	Egypt	Asasif, Thebes	Asasif 1008	F	Morris 2011
1985–1855 BCE	C–Group (first half of Dynasty XII)	Egypt	Hierakonpolis Cemetery HK27C	Tomb 9, Tomb 10, Tomb 36	F	Friedman 2004, 2017; Pieri and Antoine 2014
1750–1500 BCE	C–Group, Phase III	Egypt	Kubban Cemetery 110	Grave 271	F	Firth 1927
c.1750 BCE	Pan Grave	Egypt	Hierakonpolis Cemetery HK47	Burial 12	M	Friedman 2001, 2017
1295–1069 BCE	New Kingdom, Egypt (Ramesside)	Egypt	Deir el-Medina, Thebes	Multiple individuals	F	Austin and Arnette 2022; Austin and Gobeil 2016; Friedman 2017
1700–1200 BCE	Zahongluke	China	Zahongluke	Multiple individuals; “Mature woman,” Tomb 89QZM2 ³	F	Mallory and Mair 2000; Vigo 2004
1800–600 BCE	Yanbulake	China	Wupushuiku	Multiple individuals	-	Vigo 2004
c.1000 BCE	Late Period?	Egypt	Unknown	Private Collection, Perth Australia		Poon 2008
900–200 BCE	Subeixi	China	Yanghai	Multiple individuals	F	Li 2010 (as cited in Pankova 2013); Vigo 2004
1200 BCE	Qizilchoqa	China	Qizilchoqa	Multiple individuals?	F	Mallory and Mair 2000
900–200 BCE	Subeixi	China	Shengjindian	Multiple individuals	F	Jiang et al. 2015
900–200 BCE	Subeixi	China	Subeixi			Vigo 2004
900–200 BCE	Chavin?	Peru	Kankán	Señor de Kan Kan	M	González Garrido et al. 2015
500 BCE–100 CE	Paracas	Peru	Paracas, Wari Kayan Necropolis	M12, M28, M29, M30, M32, M66, M70, M73, M81, M85, M86, M87, M110, M199, M234, M319, M355, M420, M437, M451, Specimen no. 234 (adult and adolescent)	F/M	Aponte 2013; Maita Agurto and Minaya Cabello 2014; Stewart 1943
400–200 BCE	Pazyryk	Russia	Pazyryk burial ground	Burial 2 (two individuals), Burial 5 (two individuals)	F/M	Barkova and Pankova 2005, 2006

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

400–200 BCE	Pazyryk	Russia	Ak–Alakha 3	Princess of Ukok, Tomb 1	F	Polosmak 1994a, 1994b, 2000, 2001
400–200 BCE	Pazyryk	Russia	Verkh–Kaldzhin 2	Tomb 3	M	Polosmak 2000
393 BCE	Pazyryk	Mongolia	Olon–Kurin–Gol 10	Tomb 1	M	Molodin et al. 2008
332 BCE–395 CE	Graeco–Roman Period	Egypt	Akhmim	Multiple individuals?	F	Strouhal 1992
300 BCE–300 CE	Khotanese–Saka	China	Shanpula	Multiple individuals?	–	Wang 2001 (as cited in Pankova 2013)
100 BCE–150 CE	Meroitic Period, Nubia	Sudan	Semna South	N–247; possibly 2 individuals	F?	Alvrus 2001
100 BCE–150 CE	Meroitic Period, Nubia	Sudan	Aksha	AM 4, 12, 32, 36, 43, 45, 62, 65, 77, 81	F/M	Vila 1967
100 BCE–800 CE	Nazca	Peru	Unknown	Maria Reiche Museum	–	Lonely Planet 2019
300 BCE–400 CE	Meroitic Period, Nubia	Sudan	Various cemeteries, locations not reported	Multiple individuals	–	Shinnie 1967
200 BCE–600CE	Virú	Peru	Huaca Santa Clara	HSC7; HSC9; Sector 6. Burial 9	F	Dillon 2015; Masur 2012
260–535 CE	Virú	Peru	Huaca Gallinazo	HG1	F	Millaire and La Torre Calvera 2008
250 CE	Mixtec?	Mexico	Cave near Camotlán, Oaxaca	Momia Tolteca	F	Leboreiro et al. 2013
250–450 CE	X-Group	Nubia	unknown		M	Post et al. 1973
282–405 CE	Old Bering Sea	United States	Cape Kialegak, St. Lawrence Island, Alaska	University of Alaska?	F	Smith and Zimmerman 1975
372–402 CE	Tashtyk	Russia	Oglakhtynsky	Tomb 4	M	Kyzlasov and Pankova 2004; Pankova 2013
350–500 CE	X Group/Ballana	Sudan	Serra West, cemetery 24I3	Burial 34	M	Armélagos 1968; Armélagos 1969
c.450 CE	Moche	Peru	El Brujo/Huaca Cao	La Señora de Cao	F	Franco 2008; Mujica Barrera 2007; Vásquez Sánchez et al. 2013
500–1000 CE	Huari	Peru	Department of Ica	Multiple individuals	–	Allison 1996
600–1000 CE	Andes (culture unknown)	Peru	Cerro Centinela		M	Vivar Anya 2008
600–1000 CE	Andes (culture unknown)	Peru	Huaca Malena	Bundle 38	F	Frame and Falcon 2014
700 CE	Christian Period, Nubia	Sudan	et–Tereif site 3–J–23	Grave 50; British Museum EA83133	F	Vandenbeusch and Antoine 2015
700–800 CE	Moche	Peru	Pacatnamu	H28 Burial 5; Burial E1B	F	Ubbelohde-Doering 1967; Verano 1997
750–1375 CE	Lambayeque	Peru	El Brujo		–	Franco et al. 2007
875–1025 CE	Tiwanaku	Chile	AZ-71	AZ–71 NMT.3	F	Arriaza 1988
900–1500 CE	Chancay	Peru	Huaura Valley / Huacho Cemetery 2 / Cerro Colorado / Los Pinos / unprovinenced	Over 75 individuals including El hombre tatuado de Huacho and collections of the Museo de Historia Natural y Cultural; adult and adolescent	F/M	Altamirano Enciso and van Dalen Luna 2018, 2022; Majchrzak and van Dalen Luna 2019; RPP News 2016; Ruiz Estrada 1990, 1998, 2012; Sánchez Chuyo et al. 2022; van Dalen Luna et al. 2018
950 CE	Casma	Peru	Casma Valley	Multiple individuals; adult and adolescent	F/M	Allison 1996

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

1000–1500 CE	Chancay	Peru	Zapallan	Grave Y	F	Lothrop and Mahler 1957
1000 CE	Chiribaya	Peru	Chiribaya Alta	Museo Chiribaya / El Algarrobal Museum	F	Pabst et al. 2010 ⁴
ca.1000–1360 CE	Chiribaya	Peru	Algarrobal Valley	Chiribaya Museum; multiple individuals?	M	Reid 2001 ⁵
1000–1475 CE	Ychsma	Peru	Pachacamac Cemetery 1, Ramp 13, other?	Multiple individuals	–	Fuentes et al. 2020; Herrmann and Meyer 1993; Owens 2017; Owens and Eeckhout 2015
ca.1100 CE	Chimu	Peru	Huaura Valley	Multiple individuals	–	Krutak 2007
ca. 1250 CE	Chimu?	Peru	El Brujo	Milwaukee Public Museum A56903/23045	–	Auten 2018
ca. 800–1000 CE	Maitas Chiribaya	Chile	AZ-140	AZ-140 T.41	F	Arriaza 1988
1100–1300 CE	Ibaloy	Philippines	Nabalicong, Benguet	Appo Anno, additional individuals?	M	Garong et al. 2010; Merino 1989
1100–1300 CE	Ibaloy	Philippines	Timbac Rockshelter, Benguet	14 individuals	F/M	Garong et al. 2012; Salvador-Amores 2017
1200 CE	San Miguel	Chile	Arica (vicinity)	Multiple individuals		Allison 1996; Arriaza 1988
1200–1450 CE	Chancay	Peru	Cerro Rontoy	Kiko Rontoy	M	Roach 2008
1250 CE	Ica	Peru	Department of Ica	17, 25, Cateo 2A, Cateo 12 (total 4 adults)	F/M	Allison et al. 1981
1263–1287 CE	Andes	Peru(?)	Ancón(?); provenience based on comparative examples	La Mexicana (MDHN-1002)	F	Alterauge et al. 2013
1319–1361 CE	Chiu–Chiu (Solar Phase)	Chile	Chiu–Chiu	Lippisches Landesmuseum	F	Gill-Ferking et al. 2013
1350 CE	Chimu–Casma	Peru	Ancash, Casma Valley	SP 292, SP 293, SP 294, SP 295, SP 296, SP 297, SP 298, SP 299, SP 300A, SP 300B, SP 301, SP 302, SP 303	F/M	Allison et al. 1981
1450 CE	Inca	Peru	Department of Ica	53	F	Allison et al. 1981
ca.1450–1542 CE	Inca	Peru	Maranga, Huaca 37 (Huaca San Miguel)	Two individuals; possibly additional	F/M	Arqueologia del Peru 2007; Agence France-Presse 2016
1475 CE	Inuit	Greenland	Qilakitsoq	I/3, I/4, I/5, II/6, II/8	F	Hansen et al. 1991; Lynnerup 2015
1470–1533 CE	Ychsma	Peru	Armatambo	CF 168–2000, additional individuals	F	Diaz 2015
1580 CE	Ica Colonial	Peru	Department of Ica	AIM 8, AIM 12, Cateo 2A, Cateo 10, HM5	F	Allison et al. 1981
unknown	Chimu	Peru		Uppsala University Museum	-	Doustar 2014
unknown	Andes (culture unknown)	unknown	unknown	Multiple individuals: Ethnologisches Museum, Berlin; Musée d'Ethnographie du Trocadéro, Paris; Museo Nazionale Preistorico Etnografico, Rome (#49231, 49221); Muséum national d'histoire naturelle, Paris (#76 and #6019?); Museum of the American Indian Heye Foundation; Provinzialmuseum,	–	Boggiani 1895 ⁶ ; Danielli 1894; Finucane and Utermohlen 2004; Göldner and Deter-Wolf 2023; Joest 1887; Levy et al. 1979; Montell 1929

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

				Hannover; “The Cornell Mummy;” Harvard Peabody (#80-61-30/24005)		
unknown	Andes (culture unknown)	Peru	Ancón	Multiple individuals: Ethnologisches Museum, Berlin (#82 through 94, 2616, additional?); Field Museum, Chicago (#971371 [Grave 7/Mummy 20], 183930, 183595, 183583, 40252, 40249, 40246, 40169, 40121); Harvard Peabody Museum (87-61-30/54485) ⁵ ; Museo di Antropologia, Florence (#1798-1798?); Museo Nazionale Preistorico Etnografico, Rome (#49237); Riksmuseum, Stockholm	–	Auten 2018; Boggiani 1895 ⁷ ; Danielli 1894; Dorsey 1893, 1894; Hambly 1925; Levy et al. 1979; Mantegazza 1888; Montell 1929; Reiß and Stübel 1880-1887
unknown	Andes (culture unknown)	Peru	Cerro Azul	Burial 4, Individual 3	F	Marcus 2015
unknown	Andes (culture unknown)	Peru	Maranga	HCB02	F	Cuadros 2010
unknown	Andes (culture unknown)	Peru	Rimac Valley	Arizona State Museum A22-117-6; American Museum of Natural History no. 5202	–	Auten 2018; Morgan 1996; Stumer 1954
unknown	Native Hawaiian	United States	Hanauma Bay (vicinity), Hawaii	Bishop Museum?	F	Levy et al. 1979

NOTES

1. and 2. These identifications consist of pigment patterns preserved on defleshed skeletal remains. It has not been definitively demonstrated that those are tattoos that transferred onto bone rather than the remains of some other postmortem ritual activity.
3. Facial markings on “Chärchän Man” and “Chärchän Woman,” (Tomb 2) are popularly reported as tattooing but are likely paint.
4. The distinctive knuckle tattoos on this Chiribayan mummy are frequently misidentified in online sources as belonging to mummies from Egypt, the Tiwanaku culture, and even the Tyrolean Iceman.
5. The mummies examined by Pabst et al. and by Reid may be the same individual.
6. This tattooed hand is misidentified as ancient Egyptian, ca. 4000 BC in Cohen (2001).
7. Boggiani describes tattooing on mummies from the collection of the Museo Nazionale Preistorico Etnografico, but concludes erroneously that the marks are body paint rather than tattoos.

Sources

- Agence France–Presse. 2016. El increíble hallazgo bajo un zoológico en Perú. La Nación online, September 24, 2016. Electronic document: <https://www.lanacion.com.ar/el-mundo/el-increible-hallazgo-bajo-un-zoologico-en-peru-nid1940989/>
- Allison, M.J. 1996. Early Mummies from Coastal Peru and Chile. In Spindler, K., Wilfring, H., Rastbichler–Zissernig, E., zur Nedden, D., Nothdurfter, H. (Eds.), *The Man in the Ice: Human Mummies, A Global Study of Their Status and the Techniques of Conservation* Vol. 3. Springer–Verlag, Vienna, Austria, pp.125–130. https://link.springer.com/chapter/10.1007/978-3-7091-6565-2_12
- Allison, M.J., L. Lindberg., G. Santoro, G. Focacci. 1981. Tatuajes y pintura corporal de los indígenas precolombinos de Perú y Chile. *Chungara* 7:218–237. http://www.chungara.cl/Vols/1981/Vol7/Tatuajes_y_pintura_corporal_de_los_indigenas.pdf
- Alterauge, A.,M. González, W. Rosendahl. A. Begerock, H. Gill-Ferking, A. Vallis, E. Veselovskaya. 2013. Two Mummies with Crossed Legs from the Central Peruvian Coast: Their History and Scientific Investigation. Poster presented at the 8th World Congress of Mummy Studies, Rio de Janeiro, Brazil. Electronic document: http://www.academia.edu/5616617/2013_Two_mummies_with_crossed_legs_from_the_Central_peruvian_coast_Their_history_and_scientific_investigation._Poster_8th_World_Congress_of_Mummy_Studies_Rio_de_Janeiro
- Altamirano Enciso, A.J., P. van Dalen Luna. 2018. *Warmi Hampicamayoc*: Las Curanderas Tatuadas de Cerro Colorado, Huacho, Region Lima. *Bolletín de Lima* 40(193): 33–158. https://www.academia.edu/42307312/Warmi_Hampicamayoc_las_curanderas_tatuadas_de_Cerro_Colorado_Huacho_regi%C3%B3n_Lima
- Altamirano Enciso, A.J., P. van Dalen Luna. 2023. *Warmi Hampicamayoc*: Las Curanderas Tatuadas Del Cementerio Cerro Colorado, Huacho, Valle De Huaura, Perú. *Estudios de Antropología Biológica* 20(1): 9-56. <https://revistas.unam.mx/index.php/eab/article/view/84179>
- Alvrus, A. 2001. Examination of Tattoos on Mummified Tissue Using Infrared Reflectography. *Journal of Archaeological Science* 28:395–400. <http://doi.org/10.1006/jasc.2000.0596>
- Aponte, D. (2013). Ciclo de vida y marcas corporales en Paracas Necrópolis. In E. Romero (ed.) *Paracas*. Lima: Museo Nacional de Arqueología, Antropología e Historia, pp.41–49. https://www.academia.edu/36950243/Ciclo_de_vida_y_marcas_corporales_en_Paracas_Necropolis
- Armélagos, G. J. 1968. Paleopathology of Three Archeological Populations from Sudanese Nubia. PhD dissertation, Department of Anthropology, University of Colorado, Denver.
- Armélagos, G. J. 1969. Disease in Ancient Nubia. *Science* 163(3864): 255–59. <http://doi.org/10.1126/science.163.3864.255>
- Arriaza, B. 1988. Modelo Bioarqueológico Para la Búsqueda y Acercamiento al Individuo Social. *Chungara* 21:9–32. http://www.chungara.cl/Vols/1988/Vol21/Modelo_bioarqueologico_para_la_busqueda.pdf
- Arqueología del Perú, 2007. Complejo Arqueológico Maranga: leyendas del Parque. July 20, 2007. Electronic Document: <http://www.arqueologiadelperu.com/complejo-arqueologico-maranga-leyendas-del-parque/>
- Austin, A., M. Arnette. 2022. Of Ink and Clay: Tattooed Mummified Human Remains and Female Figurines from Deir el-Medina. *The Journal of Egyptian Archaeology* 108(1–2). <https://doi.org/10.1177/030751332211300>
- Austin, A., C. Gobeil. 2017. Embodying the Divine: A Tattooed Female Mummy from Deir el–Medina. *Bulletin de l’Institut Français d’Archéologie Orientale* 116:23–46. <https://journals.openedition.org/bifao/296>
- Auten, M. 2018. Ancient Andean Tattooing Practices. MA Thesis, University of Wisconsin–Milwaukee. <https://dc.uwm.edu/etd/1971/>
- Aufderheide, A.C. 2003. *The Scientific Study of Mummies*. Cambridge University Press, Cambridge.
- Barkova, L.L., S.V. Pankova. 2005. Tatuировки на мумиях из болших Pazirikskikh kurganov (novie materialy). *Archaeology, ethnography and anthropology of Eurasia* 2(22):48–59.

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

Barkova, L.L., S.V. Pankova. 2006. Tatuirovki na mumijakh iz Pazyrykskikh kurganov v infrakrasnykh luchakh. *Vestnik istorii, literatury, iskusstva*. Tom 3:31–42. Moscow.

Boggiani, G. 1895. Tatuaggio o Pittura?: Studio Intorno ad una Curiosa Usanza delle Popolazione Indigene dell'Antico Peru. *Atti del 11th Congresso Geografico Italiano, Roma, 22–27 settembre 1895*: Giuseppe Civelli, Roma.
<https://archive.org/details/tatuaggioopittu00bogggoog>

Capasso, L. 1993. A Preliminary Report on the Tattoos of the Val Senales Mummy (Tyrol, Neolithic). *Journal of Paleopathology* 5, 173–182.
<https://www.semanticscholar.org/paper/A-preliminary-report-on-the-tattoos-of-the-Val-Capasso/6a3b283dc20697e31d61859ca5048a8b1a4105c8>

Cuadros, M.F.B. 2010. The Bioarchaeological Effects of Inca Imperialism on a Maranga Community. MA Thesis, Department of Anthropology, University of Wyoming, Laramie.
https://www.researchgate.net/publication/326957151_The_Bioarchaeological_Effects_of_Inca_Imperialism_on_a_Maranga_Community

Cohen, T. 2001. *The Tattoo*. Magnum/Outback, London.

Deter-Wolf, A., B. Robitaille, L. Krutak, S. Galliot. 2016. The World's Oldest Tattoos. *Journal of Archaeological Science: Reports* 5: 19–24.
<http://doi.org/10.1016/j.jasrep.2015.11.007>

Danielli, I. 1894. Contributo Allo Studio del Tatuaggio Negli Antichi Peruviani. *Archivio per l'antropologia e la etnologia* 24:105–115.
<https://archive.org/details/archivioperlantr2324unse/page/648/>

Dexiu, HE. A Brief Report on the Mummies from the Zaghunlug Site in Charchan County. In Mair, V. (Ed), *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia. Volume One: Archeology, Migration and Nomadism, Linguistics*. The University of Pennsylvania Museum Publications, pp. 169–174. <https://archive.org/details/dli.pahar.3698/page/169/mode/2up>

Diaz Arriola, L. 2015. Preparation of Corpses in Ychsma Funerary Practices at Armatambo. In Eeckhout, P. Owens, L.S. (Eds.), *Funerary Practices and Models in the Ancient Andes: The Return of the Living Dead*. Cambridge University Press, New York, pp.186–209.

Dillon, R.A. 2005. Ritual Violence and Times of Transition: A Bioarchaeological Analysis of Burials from Huaca Santa Clara and Huaca Gallinazo in the Virú Valley, Peru. MA Thesis, Department of Anthropology, University of Western Ontario London, Ontario. Electronic Thesis and Dissertation Repository # 2724. <https://ir.lib.uwo.ca/etd/2724>

Dorfer, L., M. Moser, K. Spindler, F. Bahr, E. Egarter–Vigl, G. Dohr. 1998. 5200–Year–Old Acupuncture in Central Europe? *Science* 282, 242–243. <http://doi.org/10.1126/science.282.5387.239f>.

Dorfer, L., M. Moser, F. Bahr, K. Spindler., E. Egarter–Vigl, S. Giullén, G. Dohr, T. Kenner. 1999. A Medical Report from the Stone Age? *Lancet* 354, 1023–1025. [http://doi.org/10.1016/S0140-6736\(98\)12242-0](http://doi.org/10.1016/S0140-6736(98)12242-0)

Dorsey, G.A. 1893. The Necropolis of Ancon, Peru. *Scientific American* 36:14851–14852. <https://www.scientificamerican.com/article/the-necropolis-of-ancon-peru/>

Dorsey, G.A. 1894. An Archaeological Study Based on a Personal Exploration of Over One Hundred Graves at the Necropolis of Ancon, Peru. PhD dissertation, Harvard University, Cambridge.

Doustar, Martin. 2014. *Golgotha: the Cult of Skulls*. Martin Doustar, Paris.

Finucane, B., V. Utermohlen. 2004. Cornell's Peruvian Weaver. <http://www.tastescience.com/perumummy/mummyhome.html>

Firth, C.M. 1927. *The Archaeological Survey of Nubia: Report for 1910–11*. National Print Dept., Cairo. http://sfdas.com/IMG/pdf/6_-_firth_c._m._the_archaeological_survey_of_nubia_1910-1911_.pdf

Fouquet, D.M. 1898. Le Tatouage Medical en Egypte: dans l'antiquite et a l'epoque actuelle. *Archives d'Anthropologie Criminelle de Criminologie et de Psychologie Normale et Pathologique* 13:270–79. <http://criminocorpus.org/en/library/page/8912/>

Frame, M., R.A. Falcón. 2014. A Female Funerary Bundle from Huaca Malena. *Ñawpa Pacha: Journal of Andean Archaeology* 34(1): 27–59. <http://doi.org/10.1179/0077629714Z.00000000013>

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

Franco Jordan, R. 2008. La Señora de Cao. In Makowski, K. (Ed.), *Señores de los Reinos de la Luna*. Banco de Crédito del Perú, Lima, pp. 280–287.

Franco Jordan, R., C. Gálvez Mora, S. Vasquez Sanchez. 2007. *El Brujo: Practicas funerarias post mochicas*. Fundación Wiese, Lima.

Friedman, R.F. 2001. Nubians at Hierakonpolis: Excavations in the Nubian Cemeteries. *Sudan & Nubia* 5:29–38.
http://issuu.com/sudarchrs/docs/s_n05-renee

Friedman, R.F. 2004. Excavation of the C–Group Cemetery at HK27C. *Sudan & Nubia* 8:47–51.
https://issuu.com/sudarchrs/docs/s_n08_friedman_2013

Friedman, R.F. 2017. New Tattoos from Ancient Egypt: Defining Marks of Culture. In Krutak, L. and Deter–Wolf, A. (Eds.) *Ancient Ink: the Archaeology of Tattooing*. University of Washington Press, Seattle, pp. 11–36.

Friedman, R.F., D. Antoine, S. Talamo, P.J. Reimer, J.H. Taylor, B. Wills, M.A. Mannino. 2018. Natural Mummies from Predynastic Egypt Reveal The World's Earliest Figural Tattoos. *Journal of Archaeological Science* 92:116–125. <http://doi.org/10.1016/j.jas.2018.02.002>

Fuentes, S., R. Villar, D. Pozzi–Escot. 2020. Estudio Preliminar De Los Tatuajes En Restos Humanos De La Pirámide Con Rampa 13 Santuario Arqueológico Pachacamac. <https://repositorio.cultura.gob.pe/handle/CULTURA/1314>

Garong, A., S. Mihara, F. Datar, W. Ronquillo, H. Koike. 2010. Carbon and Nitrogen Stable Isotope Analysis Using Human Bones and Hair from Philippine Burial Sites. *Bulletin of the Graduate School of Social and Cultural Studies, Kyushu University* 16:25–43.
http://www.researchgate.net/publication/44128866_Carbon_and_nitrogen_stable_isotope_analysis_using_human_bones_and_hair_from_Philippine_burial_sites

Garong, A., S. Mihara, F. Datar, W. Ronquillo, H. Koike. 2012. Kabayan Mummies Research: Timbac Rockshelters 1–2, Timbac, Pacso, Kabayan, Benguet. Report on file, National Museum of the Philippines, Manila.

Gill-Frerking, H., A.M. Maria Begerock, W. Rosendahl. 2013. Interpreting the Tattoos on a 700–year Old Mummy from South America. In Philippe Della Casa, P., Witt, C. (Eds.), *Tattoos and Body Modifications in Antiquity: Proceedings of the Sessions at the Annual Meetings of the European Association of Archaeologists in The Hague and Oslo, 2010/11*. Zurich Studies in Archaeology 9. Chronos–Verlag, Zurich, pp. 59–66.

Göldner, G., A. Deter-Wolf. 2023. DStretch Tattoo Protocol: Full Step-By-Step Protocol for Identification and Visualization of Tattoos on Preserved Archaeological Remains Using the ImageJ plugin DStretch. protocols.io.
<https://dx.doi.org/10.17504/protocols.io.n92ldp52xl5b/v1>

González Garrido, V.A., G. Pérez Bermúdez, F. Rojas Peña, K. Salinas Rodríguez, Z. Érica Sánchez Barreto. 2015. Condiciones Turísticas de la Provincia de Julcan, Región La Libertad, para el Desarrollo del TRC. Trujillo: Universidad Nacional de Trujillo Facultad de Ciencias Sociales Escuela Académico Profesional de Turismo.
http://www.academia.edu/33233502/UNIVERSIDAD_NACIONAL_DE_TRUJILLO_FACULTAD_DE_CIENCIAS_SOCIALES_ESCUELA_ACAD%C3%89MICO_PROFESIONAL_DE_TURISMO_DOCENTE

Hambly, W.D. 1925. *The History of Tattooing, and its Significance*. H.F. & G. Witherby, London.

Hansen, J.P.H., J. Meldgaard, J. Nordqvist (Eds.). 1991. *The Greenland Mummies*. Smithsonian Institution Press, Washington, DC

Herrmann, B., R.D. Meyer. 1993. *Südamerikanische Mumien aus vorspanischer Zeit: eine radiologische Untersuchung*. Staatliche Museen zu Berlin, Preussischer Kulturbesitz, Berlin.

Jiang, H., Y. Zhang, E. Lu., C. Wang. 2015. Archaeobotanical Evidence of Plant Utilization in the Ancient Turpan of Xinjiang, China: A Case Study at the Shengjindian Cemetery. *Vegetation History and Archaeobotany* 24:165–177. <http://doi.org/10.1007/s00334-014-0495-6>

Joest, W. 1887. *Tätowiren, Narbenzeichnen und Körperbemalen; ein Beitrag zur vergleichenden Ethnologie*. A. Asher & Co., Berlin.
<http://haab-digital.klassik-stiftung.de/viewer/toc/1458827275/1/>

Keimer, L. 1948. *Remarques sur le Tatouage dans l’Égypte Ancienne*. Memoires Presentes a l’Institut D’Égypte, vol. 53. L’institut Français d’Archeologie Orientale, Cairo. http://archive.org/details/MIE_53

Krutak, L. 2007. *The Tattooing Arts of Tribal Women*. Bennett & Bloom, London.

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

Kyzlasov, L.R., S.V. Pankova. 2004 Tatuировки древней mumii iz Khakasii (rubezh nashei ery). *Soobsheniya Gosuderstvennogo Ermitazha* LXII:61–67. St. Petersburg.

Leboreiro, I., J. Mansilla, F. de Pierrebouurg, C. Moulherat. 2013. Momias y Tatuajes: Leopoldo Batres y La 'Momia Tolteca.' *Arqueología mexicana* 21(121): 25–29.
https://www.researchgate.net/publication/292767605_Momias_y_Tatuajes_Leopoldo_Batres_y_La_'Momia_Tolteca

Levy, J., M. Sewell, N. Goldstein. 1979. A Short History of Tattooing. *Journal of Dermatological Surgery and Oncology* 5(11): 851–856.
<https://onlinelibrary.wiley.com/doi/10.1111/j.1524-4725.1979.tb00768.x>

Li, X. 2010. Interaction of Cultures in the Turfan Hollow and Adjacent Regions in the Bronze – Early Iron Age. In: *Di san jie Tulufan xue ji Ou Ya you mu min zu de qi yuan yu qian xi guo ji xue shu yan tao hui lun wen ji*, pp. 3–20. Shanghai gu ji chu ban she, Shanghai.

Lothrop, S.K, J. Mahler. 1957. *A Chancay–style grave at Zapallan, Peru: An Analysis of its Pottery and Other Furnishings*. The Museum, Cambridge. <http://archive.org/details/chancaystylegrav0050loth>

Lonely Planet. 2019. *Lonely Planet Best of Peru*. Lonely Planet Global Limited, Ireland.

Lorkiewicz-Muszyńska, D., J. Sobol, J. Langer, A. Koško, P. Włodarczyk, D. Żurkiewicz, M. Potupchik. 2018. Ritual position and “tattooing” techniques in the funeral practices of the “barrow cultures” of the Pontic-Caspian steppe / forest steppe area. Porohy 3A, Yampil Region, Vinnytsia Oblast: Specialist analysis research perspectives. *Baltic-Pontic Studies* 22(1): 64–90.
<https://doi.org/10.1515/bps-2017-0022>

Lynnerup, N. 2015. The Thule Inuit Mummies From Greenland . *The Anatomical Record* 298: 1001-1006.
<https://anatomypubs.onlinelibrary.wiley.com/doi/full/10.1002/ar.23131>

Majchrzak, L., P. van Dalen Luna. 2019. La interacción con los muertos en la cultura Chancay. *Estudios Latinoamericanos* 39: 111–130.
https://www.researchgate.net/publication/348158763_La_interaccion_con_los_muertos_en_la_cultura_Chancay

Mantegazza, P. 1888. Il Tatuaggio Nell'Antico Peru di Paolo. *Archivio per l'antropologia e la etnologia* 18:43–48.
https://www.google.com/books/edition/Archivio_per_l_antropologia_e_la_etnolog/BA0SAAAAAYAAJ

Maita Agurto, P.K., E.E. Minaya Cabello. 2014. El Trauma en la Piel: El Registro de Tatuajes Paracas Necrópolis. *Jangwa Pana* 13, 14–33.
<https://doi.org/10.21676/16574923.1369>

Mallory, J.P., V.H. Mair. 2000. *The Tarim Mummies: Ancient China and the Mystery of the Earliest Peoples from the West*. Thames & Hudson, London.

Masur, L. J. 2012. Peanuts and Prestige on the Peruvian North Coast: The Archaeology of Peanuts at Huaca Gallinazo (V–59) and Huaca Santa Clara (V–67). MA Thesis, Department of Anthropology, University of British Columbia.
<https://open.library.ubc.ca/media/download/pdf/24/1.0073103/4>

Marcus, J. 2015. Studying the individual in Prehistory: a tale of three women from Cerro Azul, Peru. *Ñawpa Pacha, Journal of Andean Archaeology* 35(1):1–22.
https://www.researchgate.net/publication/277912074_Studying_the_individual_in_Prehistory_a_tale_of_three_women_from_Cerro_Azul_Peru

Merino, F.S. 1989. *The Kabayan Mummies and the Bendiyán Canao*. Self–published, Kabayan, Benguet.

Merino, F.S. 1999. The Mummies of Kabayan. *Proceedings of the Series of Seminar–Workshops and Exhibit on Oral and Local History* 3:92–94. National Historical Institute, Manila.

Millaire, J–F., E. La Torre Calvera. 2008. *Proyecto Arqueológico Virú Temporada 2008*. Instituto Nacional de Cultura, Lima.

Molodin, V.I., H. Parzinger, D. Ceveemdorzh, J.N. Garkusa, A.E. Grisin. 2008. Das Skythenzeitliche Kriegergrab aus Olon–Kurin–Gol Neue Entdeckungen in der Permafrostzone des Mongolischen Altaj. *Eurasia Antiqua* 14, 241–265.
<https://dialnet.unirioja.es/servlet/articulo?codigo=4023894>

Montell, G. 1929. *Dress and Ornaments in Ancient Peru; Archaeological and Historical Studies*. Elanders boktryckeri aktiebolag, Göteborg.

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

Morgan, A. 1996. The pre-Columbian pottery figurines of the central coast of Peru. PhD Dissertation, Institute of Archaeology, University College, London. <https://discovery.ucl.ac.uk/id/eprint/1349610/>

Morris, E.F. 2011. Paddle Dolls and Performance. *Journal of the American Research Center in Egypt* 46:71–103. https://www.academia.edu/2023000/Paddle_dolls_and_performance_in_ancient_Egypt

Mujica Barreda, E. (Ed.). 2007. *El Brujo: Huaca Cao, centro ceremonial Moche en el Valle de Chicama*. Fundación Wiese, Lima.

Owens, L. 2017. “Los restos humanos de Pachacamac,” in Pozzi–Escot, D. (Ed.) *Pachacamac: El Oráculo en el Horizonte Marino del sol Poniente*. Banco de Crédito del Perú, Lima, pp. 238–250. https://www.academia.edu/35469543/Los_restos_humanos_de_Pachacamac

Owens, L.S., P. Eeckhout. 2015. To the God of Death, Disease, and Healing: Social Bioarchaeology of Cemetery I at Pachacamac. In Eeckhout, P. Owens, L.S. (Eds.), *Funerary Practices and Models in the Ancient Andes*. Cambridge University Press, New York, pp.158–185.

Pabst, M.A., I. Letofsky-Papst, E. Bock, M. Moser, L. Dorfer, E. Egarter-Vigl, F. Hofer, F. 2009. The Tattoos of the Tyrolean Iceman: A Light Microscopical, Ultrastructural and Element Analytical Study. *Journal of Archaeological Science* 36, 2335–2341. <https://doi.org/10.1016/j.jas.2009.06.016>

Pabst, M.A., I Letofsky-Pabst, M. Moser, K. Spindler, E. Bock, P. Wilhelm, L. Dorfer, J.B. Geigl, M. Auer, M.R. Speicher, F. Hofer. 2010. Different Staining Substances Were Used in Decorative and Therapeutic Tattoos in a 1,000–Year–Old Peruvian Mummy. *Journal of Archaeological Science* 37(12): 3256–62. <http://doi.org/10.1016/j.jas.2010.07.026>

Pankova, S.V. 2013. One More Culture with Ancient Tattoo Tradition in Southern Siberia: Tattoos on a Mummy from the Oglakhty Burial Ground, 3rd–4th century AD. In Della Casa, P., Witt, C. (Eds.), *Tattoos and Body Modifications in Antiquity: Proceedings of the Sessions at the EAA Annual Meetings in The Hague and Oslo, 2010/11*. Zurich Studies in Archaeology 9. Chronos Verlag, Zurich, pp. 75–86. https://www.academia.edu/6094311/One_More_Culture_with_Ancient_Tattoo_Tradition_in_Southern_Siberia_Tattoos_on_a_Mummy_from_the_Oglakhty_Burial_Ground_3rd-4th_century_AD

Pieri, A., D. Antoine. 2014. A Tattooed Trio at HK27C. *Nekhen News* 26, 28–29. https://www.academia.edu/37790140/A_Tattooed_Trio_at_HK27C

Polosmak, N.V. 1994a. The Ak-Alakh: “Frozen Grave” Barrow. *Ancient Civilizations from Scythia to Siberia*, vol. I, 3:346–54. Leiden.

Polosmak, N.V. 1994b. A Mummy Unearthed from the Pastures of Heaven. *National Geographic* 4:80–103.

Polosmak, N.V. 2000. Tatuировки u pazirikitsev. *Archaeology, ethnography and Anthropology of Eurasia* 4:95–102.

Polosmak, N.V. 2001. *Vsadniki Ukoka*. Institute of Archaeology and Ethnology, Novosibirsk.

Poon, K.W.C. 2008. In Situ Chemical Analysis of Tattooing Inks and Pigments: Modern Organic and Traditional Pigments in Ancient Mummified Remains. PhD dissertation, Center for Forensic Science, University of Western Australia, Perth. <https://research-repository.uwa.edu.au/en/publications/in-situ-chemical-analysis-of-tattooing-inks-and-pigments-modern-o>

Post, P. W., F. Daniels, Jr., G.J. Armelagos. 1973. Ancient and mummified skin. *Cutis* 11:779–781.

Reid, H. 2001. *In Search of the Immortals: Mummies, Death, and the Afterlife*. St. Martin’s Press, New York.

Reiß, W., A. Stübel. 1880–1887. *The Necropolis of Ancon in Perú*, Vol. I. Kean, A.H. (Trans.). A. Asher & Co., Berlin. <https://catalog.hathitrust.org/Record/101853177>

Roach, J. 2008. Rare Mummy Found with Strange Artifacts, Tattoo in Peru. *National Geographic News*, <http://news.nationalgeographic.com/news/2008/07/080717-new-mummy-missions.html>

RPP News. 2016. Huaura: hallan momia de mujer tatuada en el distrito Santa María. 25 January, 2016. <http://rpp.pe/peru/lima/huaura-encuentran-restos-oseos-de-momia-en-distrito-santa-maria-noticia-932480>

Ruiz Estrada, A. 1990. El Hombre Tatuado de Huacho. *Los Especiales de Huacho*, 1(3): 5-7. https://www.academia.edu/20833927/El_Hombre_Tatuado_de_Huacho

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

- Ruiz Estrada, A. 1998. Sobre el Hallazgo de Momias Tatuadas en Huacho. *Boletín del Museo de Arqueología y Antropología* 1(3): 6–7. <http://www.acuedi.org/ddata/192.pdf>
- Ruiz Estrada, A. 2012. Tatuajes prehispánicos de Huacho, valle de Huaura, Lima. *Revista Quillasumaq: Estudios interdisciplinarios del antiguo y actual Perú* 1: 6–19. https://www.academia.edu/19832599/Tatuajes_prehisp%C3%A1nicos_de_Huacho_valle_de_Huaura_Lima
- Salvador-Amores, A. 2017. *Burik: Tattoos of the Ibaloy Mummies of Benguet, North Luzon, Philippines*. In Krutak, L. and Deter-Wolf, A. (Eds.) *Ancient Ink: the Archaeology of Tattooing*. University of Washington Press, Seattle, pp. 36–55.
- Samadelli, M., M. Melis, M. Miccoli, E.E. Vigl, A.R. Zink. 2015. Complete Mapping of the Tattoos of the 5300-year-old Tyrolean Iceman. *Journal of Cultural Heritage* 16(5): 753–758. <http://doi.org/10.1016/j.culher.2014.12.005>
- Sánchez Chuyo, L., G. Gayoso Bazán, L. Costilla Mora. 2022. Análisis Preliminar Bioarqueológico de dos Momias Chancay del Museo de Historia Natural y Cultural. Universidad Privada Antenor Orrego (UPAO), Trujillo, Perú. *Quingnam* 8: 83–108. <http://doi.org/10.22497/quingnam.08.0804>
- Shinnie, P.L. 1967. *Meroe, a Civilization of the Sudan*. Ancient Peoples and Places, Vol. 55. Thames and Hudson, London.
- Shishlina, N.I., E.V. Belkevich, A.N. Usachuk. 2013. Bronze Age Tattoos: Sympathetic Magic or Decoration? In Philippe Della Casa, P., Witt, C. (Eds.), *Tattoos and Body Modifications in Antiquity: Proceedings of the Sessions at the Annual Meetings of the European Association of Archaeologists in The Hague and Oslo, 2010/11*. Zurich Studies in Archaeology 9. Chronos-Verlag, Zurich, pp. 67–74. https://www.researchgate.net/publication/271587804_Bronze_Age_Tattoos_Sympathetic_Magic_or_Decoration
- Sjøvold, T. 2003. The Location of the Iceman Tattoos. In Fleckinger, A. (Ed.), *Die Gletschermumie aus der Kupferzeit 2. La Mummia Dell'età del Rame: 2: Nuove Ricerche Sull'uomo Venuto dal Ghiaccio*. Schriften des Südtiroler Archäologiemuseums, Bolzano, Italy, pp. 111–122.
- Smith, G.S., M.R. Zimmerman. 1975. Tattooing Found on a 1600 Year Old Frozen, Mummified Body from St. Lawrence Island, Alaska. *American Antiquity* 40(4): 433–437. <https://doi.org/10.2307/279329>
- Stewart, T.D. 1943. Skeletal remains from Paracas, Peru. *American Journal of Physical Anthropology*, 1: 47–63. <https://doi.org/10.1002/ajpa.1330010113>
- Strouhal, E. 1992. *Life of the Ancient Egyptians*. University of Oklahoma Press, Norman.
- Stumer, L.M. 1954. Population Centers of the Rimac Valley of Peru. *American Antiquity* 20(2):130–148. <http://doi.org/10.2307/277563>
- Ubbelohde-Doering, H., 1967. *On the royal highways of the Inca: Archaeological treasures of ancient Peru*. Praeger, New York.
- van Dalen Luna, P, A.A. Enciso, L. Majchrzak. 2018. Marcas para la vida, señales para la muerte: Los cuerpos tatuados de la cultura Chancay en Cerro Colorado, Huacho, Perú. *Revista M*. 3(6):344–377. <http://www.seer.unirio.br/index.php/revistam/article/view/9045>
- Vandenbeusch, M., D. Antoine. 2015. Under Saint Michael's Protection: A Tattoo from Christian Nubia. *Journal of the Canadian Centre for Epigraphic Documents* 1, 15–19. https://www.academia.edu/13126617/Under_Saint_Michaels_protection_a_tattoo_from_Christian_Nubia
- Vásquez Sánchez, V.F., R. Franco Jordán, T.E. Rosales Tham, I. Rey Fraile, L.T. Cifuentes, B. Álvarez Dorda. 2013. Estudio Microquímico Mediante MEB–EDS (Análisis de Energía Dispersiva por Rayos X) del Pigmento Utilizado en el Tatuaje de la Señora de Cao. *Archaeobios* 7(1): 5–21. https://www.academia.edu/5592567/Estudio_Microquimico_mediante_MEB-EDS_pigmento_tatuaje_Se%C3%B1ora_de_Cao
- Verano, J.W. 1997. Advances in the Paleopathology of Andean South America. *Journal of World Prehistory* 11(2): 237–268. <https://link.springer.com/article/10.1007/BF02221205>
- Vigo, L. 2004. Cultural Diffusion and Identity: Material Culture in Northwest China -II and I millennia BCE. PhD Thesis, School of Oriental and African Studies. ProQuest 1067294. <https://eprints.soas.ac.uk/28774/1/10672942.pdf>
- Vila, A. 1967. *Aksha II: Le Cimétière Meroïtique d'Aksha*. Librairie Klincksiek, Paris.
- Vivar Anaya, J. 2008. Restos Humanos Tatuados Procedentes de Huaura. *Boletín de Lima* 30(152):5–8.

Tattooed Human Mummies Database, Version 6.0

[DOI 10.6084/m9.figshare.5738439](https://doi.org/10.6084/m9.figshare.5738439)

Wang B. (Ed.). 2001. *Xinjiang gushi: gudai Xinjiang jumin ji qi wenhua (The Ancient Corpses of Xinjiang: The Ancient Peoples of Xinjiang and Their Culture)*. Mair, V.H. (Trans.) Xinjiang Renmin Chubanshe, Ürümchi.

Winlock, H.E. 1923. The Museum's Excavations at Thebes. *The Metropolitan Museum of Art Bulletin* 18(12), Part 2:11–39.
<https://www.jstor.org/stable/23031109>