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**REPORT ON HOW MAMMOTH IVORY CONTRIBUTES TO ELEPHANT
POACHING
BY THE ANIMAL LAW COMMITTEE**

This report discusses recent state laws restricting trade in various types of ivory, specifically mammoth ivory, and how legal trade in mammoth ivory contributes to the elephant poaching crisis.

I. THE ELEPHANT POACHING CRISIS AND STATE IVORY BANS

Ivory is derived from the teeth or tusks of mammals, including whales, walruses, mammoths, mastodons, and, in its most familiar form, elephants.¹ Illegal trade in ivory, and particularly ivory from elephants, is a global criminal enterprise responsible for countless animals' deaths. In particular, while international trade in elephant ivory has been significantly restricted for decades,² poachers continue to slaughter the animals in staggering numbers, with over 90% of illicit elephant ivory in circulation from recently killed elephants.³ Indeed, poaching has put even the species itself at risk. One 2014 study of poaching in Africa estimated a 64% decline in the continent's elephant population from 2002 to 2012.⁴ And the first continent-wide, standardized survey of African savannah elephants in 2016 found similarly large declines.⁵ In

¹ E.g., Edgard O. Espinoza & Mary-Jacque Mann, Identification Guide for Ivory and Ivory Substitutes at 4 (1999), <https://cites.org/sites/default/files/eng/resources/pub/E-Ivory-guide.pdf>. (All websites referenced in this report were last visited on February 11, 2019.)

² The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which regulates international trade in African and Asian elephants (including those elephants' ivory), has significantly restricted international trade in Asian and African elephant ivory since 1975 and 1976, respectively. U.S. Fish & Wildlife Service (FWS), *CITES & Elephants: What Is the "Global Ban" on Ivory Trade?* (2013), <https://www.fws.gov/le/pdf/CITES-and-Elephant-Conservation.pdf>; CITES (Mar. 3, 1973), 27 U.S.T. 1087; CITES, Appendices I, II, and III (Oct. 4, 2017), <https://cites.org/sites/default/files/eng/app/2017/E-Appendices-2017-10-04.pdf>.

³ Columbia University, Lamont-Doherty Earth Observatory, *Illegal Ivory Almost All From Recent Killing, Study Finds* (Nov. 7, 2016), <https://www.ldeo.columbia.edu/news-events/illegal-ivory-almost-all-recent-killing-study-finds> (citing Thure E. Cerling et al., *Radiocarbon Dating of Seized Ivory Confirms Rapid Decline in African Elephant Populations and Provides Insight into Illegal Trade*, 113 PROC. NATL. ACAD. SCI. U.S.A 13330, 13330 (2016), <https://www.pnas.org/content/pnas/113/47/13330.full.pdf>).

⁴ George Wittemyer et al., *Illegal Killing for Ivory Drives Global Decline in African Elephants*, 111 PROC. NATL. ACAD. SCI. U.S.A 13117, 13118 (2014), <http://www.pnas.org/content/pnas/111/36/13117.full.pdf>.

⁵ Michael J. Chase et al., *Continent-wide Survey Reveals Massive Decline in African Savannah Elephants*, PEERJ 4:e2354 at 11-15 (2016), <https://peerj.com/articles/2354.pdf>. The study estimated a population of 350,000, meaning an average of 27,700 elephants died per year during 2010-2014.

some African countries the elephant population has dwindled to a handful of animals, and Sierra Leone's elephants may have vanished altogether.⁶

Nor is it just the declining numbers that are concerning; so too are the poachers' methods. Poachers often kill the herbivorous creatures with high-powered rifles like AK-47s or even with grenade launchers, then hack out the animals' tusks with hatchets.⁷ Other poaching methods include poisoning elephant watering holes with cyanide.⁸

Yet the illicit ivory trade is not limited to elephants' native areas; it is global. And in fact, much illegal ivory finds its way into the United States.⁹ For instance, a 2014 investigation of ivory sales in California, one of the country's largest ivory markets, estimated that most ivory sold in the state was illegal, sourced from recently killed elephants.¹⁰

In the face of this poaching crisis, at least eight states — California,¹¹ Hawaii,¹² Illinois,¹³ Nevada,¹⁴ New Hampshire,¹⁵ New Jersey,¹⁶ New York,¹⁷ and Oregon¹⁸ — have enacted strict

⁶ Michael McCarthy, *Trade in Mammoth Ivory "Is Fueling Slaughter of African Elephants"*, THE INDEPENDENT, (Sept. 29, 2010), <https://www.independent.co.uk/environment/nature/trade-in-mammoth-ivory-is-fuelling-slaughter-of-african-elephants-2092528.html>; Agence France-Presse, *Sierra Leone Elephants Wiped Out – Official*, TIMES OF MALTA (Nov. 28, 2009), <https://www.timesofmalta.com/articles/view/20091128/world/sierra-leone-elephants-wiped-out-official.283635>.

⁷ Tristan McConnell, *The Bloody Toll of Congo's Elephant Wars*, GQ (April 16, 2018), <https://www.gq.com/story/inside-the-ivory-wars>; see also Agence France-Presse, *Botswana Poaching Spree Sees 90 Elephants Killed in Two Months*, THE GUARDIAN (Sept. 4, 2018), <https://www.theguardian.com/world/2018/sep/04/ninety-elephant-carcasses-found-in-botswana-with-tusks-and-trunks-chopped>.

⁸ Peta Thornycroft and Aislinn Laing, *Poachers Kill 300 Zimbabwe Elephants with Cyanide*, THE TELEGRAPH (Oct. 20, 2013), <https://www.telegraph.co.uk/news/worldnews/africaandindianocean/zimbabwe/10390634/Poachers-kill-300-Zimbabwe-elephants-with-cyanide.html>.

⁹ U.S. Fish & Wildlife Service (FWS), Revisions to the Endangered Species Act (ESA) Special Rule for the African Elephant: Questions and Answers ("Questions and Answers") at 2, <https://www.fws.gov/international/pdf/questions-and-answers-african-elephant-4d-final-rule.pdf>.

¹⁰ Daniel Stiles, *Elephant Ivory Trafficking in California, USA*, at Abstract (2015) (prepared for the Natural Resources Defense Council), https://www.nrdc.org/sites/default/files/wil_15010601a.pdf.

¹¹ CAL. FISH & GAME CODE § 2022, <http://codes.findlaw.com/ca/fish-and-game-code/fgc-sect-2022.html>.

¹² HAW. REV. STAT. § 183D-66, https://www.capitol.hawaii.gov/hrscurrent/Vol03_Ch0121-0200D/HRS0183D/HRS_0183D-0066.htm.

¹³ 815 ILL. COMP. STAT. § 357, <http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=3888&ChapterID=67>.

¹⁴ NEV. REV. STAT. § 597.905, <https://www.leg.state.nv.us/NRS/NRS-597.html#NRS597Sec905>.

¹⁵ N.H. REV. STAT. § 212-C: 1–2, <http://www.gencourt.state.nh.us/rsa/html/NHTOC/NHTOC-XVIII-212-C.htm>.

¹⁶ N.J. REV. STAT. § 23:2A-13.1–13.5, <http://codes.findlaw.com/nj/title-23-fish-and-game-wild-birds-and-animals/nj-st-sect-23-2a-13-3.html/>.

¹⁷ N.Y. E.C.L. § 11-0535-A, <https://www.nysenate.gov/legislation/laws/ENV/11-0535-A>. New York allows, subject to registration, the one-time distribution of articles containing mammoth ivory to a legal beneficiary of a trust or heir or distributes of an estate. See New York State Department of Environmental Conservation, *Elephant and Mammoth Ivory or Rhinoceros Horn Registration* (Jan. 2018), https://www.dec.ny.gov/docs/wildlife_pdf/etsihreg18.pdf.

restrictions on ivory trade. Several other states have similar bills pending.¹⁹ Most of these states have imposed general bans on trading not just elephant ivory but also similar products, including ivory from the extinct mammoth.²⁰ Mammoth ivory has historically not been subject to federal trade restrictions.²¹

II. HOW TRADE IN MAMMOTH IVORY CONTRIBUTES TO ELEPHANT POACHING

While there is a direct and clear connection between restricting trade in living elephants' ivory and protecting those elephants,²² states also have legitimate reasons for restricting trade in mammoth ivory. Indeed, restricting trade in these extinct animals' parts helps protect living elephants.

First, prohibiting trade in mammoth ivory makes it more difficult for traders of illegal elephant ivory to escape detection. As mentioned above, mammoth ivory has historically been legal, and still is in most states; it can accordingly be freely bought and sold.²³ And while such ivory is not impossible to distinguish from elephant ivory, doing so is a task for experts²⁴ — making detection a practical and costly obstacle for law enforcement, let alone most consumers. As a result, to avoid being caught, smugglers often try to pass off elephant ivory as mammoth

¹⁸ OR. REV. STAT. § 498.022, https://www.oregonlegislature.gov/bills_laws/ors/ors498.html.

¹⁹ The Journal of Paleontological Sciences, States Banning The Sale of Fossil Ivory and Proposed Legislation (Dec. 8, 2018), <https://www.aaps-journal.org/Fossil-Ivory-Legislation.html> (listing states that have introduced, though not yet enacted, ivory bills).

²⁰ See notes 11, 12, 13, 14, 16 & 17 above. California's law also bans trade in mastodon products.

²¹ Jani Actman, *Woolly Mammoth Ivory Is Legal, and That's a Problem for Elephants*, NATIONAL GEOGRAPHIC (Aug. 23, 2016), <https://news.nationalgeographic.com/2016/08/wildlife-woolly-mammoth-ivory-trade-legal-china-african-elephant-poaching/>.

²² See generally Solomon Hsiang & Nitin Sekar, *Does Legalization Reduce Black Market Activity? Evidence from a Global Ivory Experiment and Poaching Data*, NBER Working Paper No. 22314 (June 2016), <https://www.nber.org/papers/w22314.pdf>. Notably, some scholars speculate that blanket ivory prohibitions may hurt elephants, arguing that prohibition decreases ivory supply without decreasing demand. This in turn leads to higher ivory prices, which incentivizes poachers to kill more elephants. Enrico Di Minin, *Debate: Would a Legal Ivory Trade Save Elephants or Speed Up the Massacre?*, THE GUARDIAN (Oct. 1, 2016), <https://www.theguardian.com/environment/2016/oct/01/debate-can-legal-ivory-trade-save-elephants>.

²³ The Journal of Paleontological Sciences, States Banning The Sale of Fossil Ivory and Proposed Legislation, note 19 above (noting just a handful of states that have passed recent ivory restrictions).

²⁴ E.g., Edgard O. Espinoza & Mary-Jacque Mann, Identification Guide for Ivory and Ivory Substitutes, note 1 above, at 3 (“[A]n examination of the carved ivory object by a trained scientist is still necessary to obtain a positive identification of the species source.”); see also U.S. Fish & Wildlife Service, Forensics Laboratory, *Natural Ivory*, https://www.fws.gov/lab/ivory_natural.php; Testimony of Kevin T. Uno, Ph.D., of Lamont-Doherty Earth Observatory of Columbia University, N.Y. State Assembly, Standing Committee on Environmental Conservation, Trans. of Public Hearing on The Effectiveness of New York's Restrictions On The Sale Of Ivory, at 162:8-18, 168:14-170:13 (Jan. 16, 2014), http://nystateassembly.granicus.com/MinutesViewer.php?view_id=8&clip_id=854&doc_id=8bc571b0-ec51-1031-927d-78be5054b89b.

ivory or identify elephant ivory as mammoth ivory on shipment documentation.²⁵ Notably, the vast majority of mammoth ivory exported from Siberia ends up in China, the same place where most illegal ivory ends up.²⁶

Second, allowing trade in any ivory likely increases the overall demand for ivory, and poaching in turn rises to meet that demand. A 2016 working paper of the National Bureau of Economic Research studied the effects of certain large-scale — and legal — sales of ivory.²⁷ The study found a 66% increase in illegal ivory production following the legal sales.²⁸ While some of this increase is likely due to the “passing off” effect noted above, the study’s authors also found evidence that legal trade had directly increased demand — for instance, by removing social stigmas around ivory.²⁹

In light of this, and despite the fact that mammoths have long been extinct, several states have extended their trade restrictions to mammoth ivory, even while aiming laws at protecting living creatures.³⁰ India has likewise prohibited the import of mammoth ivory, while Israel and Kenya have proposed similar laws.³¹

²⁵ FWS, Questions and Answers, note 9 above, at 2 (“Our criminal investigations and anti-smuggling efforts have clearly shown legal ivory trade can serve as a cover for illegal trade.”); Jani Actman, *Woolly Mammoth Ivory Is Legal, and That’s a Problem for Elephants*, NATIONAL GEOGRAPHIC, note 21 above; Solomon Hsiang & Nitin Sekar, *Does Legalization Reduce Black Market Activity?*, note 22 above, at 15. Although we have not found specific evidence of mastodon ivory being used to mask illegal elephant ivory, we note that mastodon ivory often appears to be marketed as near-interchangeable with mammoth ivory. *See, e.g.*, The Boone Trading Company Inc., “Mammoth Ivory Jewelry,” <https://www.boonetradings.com/collections/mammoth-ivory-jewelry> (“These very unique jewelry pieces are made from genuine mammoth and mastodon ivory from Alaska, Canada and Siberia, how cool is that!”).

²⁶ *Id.*

²⁷ Solomon Hsiang & Nitin Sekar, *Does Legalization Reduce Black Market Activity?*, note 22 above, at 3-4.

²⁸ *Id.* at 15. Notably, some scholars have challenged this study’s findings. *See* CITES, Seventeenth Meeting of the Conference of the Parties, Johannesburg, South Africa, A Statement from the MIKE and ETIS Technical Advisory Group on Recent Claims that the CITES-Approved Ivory Sales in 2008 Caused a Spike in Poaching Levels (2016), <https://cites.org/sites/default/files/eng/cop/17/InfDocs/E-CoP17-Inf-42.pdf>.

²⁹ Solomon Hsiang & Nitin Sekar, *Does Legalization Reduce Black Market Activity?*, note 22 above, at 7.

³⁰ On signing New York State’s general ban on ivory articles, Governor Andrew Cuomo stated: “Restricting the market for ivory articles will help bring an end to the slaughtering of elephants and rhinoceroses and sends a clear message that we will not allow the illegal ivory trade to continue in New York.” *Governor Cuomo Signs New Law to Combat Illegal Ivory Trade and Protect Endangered Species* (Aug. 12, 2014) <https://www.governor.ny.gov/news/governor-cuomo-signs-new-law-combat-illegal-ivory-trade-and-protect-endangered-species>. Similarly, the express intent of the ivory ban in New Jersey — the first state in the nation to pass such a law — is to “protect all species of rhinoceros and all species of animals with ivory teeth and tusks.” N.J. REV. STAT. § 23:2A-13.1.

³¹ Zafir Rinat, *In Bid to Save the Elephants, Israel and Kenya Call for Supervision of Trade in Mammoth Ivory*, HAARETZ (Nov. 15, 2018), <https://www.haaretz.com/israel-news/.premium-to-save-elephants-israel-and-kenya-see-curbs-in-mammoth-ivory-trade-1.6655531>; *see also* CITES, CoP17 Doc. 38: Identification of Elephant and Mammoth Ivory in Trade (Sept. 5, 2016 – Oct. 5, 2016), <https://cites.org/sites/default/files/eng/cop/17/WorkingDocs/E-CoP17-38.pdf>.

Significantly, to the extent that recent state laws reduce the illegal ivory trade, they also help combat criminality and terrorism. The illegal ivory trade is closely linked to the drug trade, money-laundering, weapons trafficking, trading, and governmental corruption.³² In fact, New Jersey's 2014 ivory ban was enacted in part to eliminate a source of funding — poaching profits — from terrorist groups, including Al Qaeda, that benefit from the illegal ivory trade.³³

Finally, even where legal ivory may not facilitate the illegal elephant ivory trade, mammoth tusks are still rare and in finite supply. Their use in ivory products accordingly reduces the amount of tusks available for scientific study.³⁴ Further, excavating such tusks causes damage to the environment, particularly the Siberian wilderness.³⁵

Animal Law Committee
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³² Tristan McConnell, “*They’re Like the Mafia*”: *The Super Gangs Behind Africa’s Poaching Crisis*, THE GUARDIAN (Aug. 19, 2017), <https://www.theguardian.com/environment/2017/aug/19/super-gangs-africa-poaching-crisis>; Alex Shoumatoff, *Ivory and Agony*, VANITY FAIR (Aug. 2011), <http://www.vanityfair.com/culture/features/2011/08/elephants-201108>. For an extensive study of the highly-organized nature of the illegal poaching industry and its links to militias, terrorists, organized crime, and governmental corruption, see Varun Vira and Thomas Ewing, *Ivory’s Curse: The Militarization & Professionalization of Poaching in Africa* (April 2014), <https://www.all-creatures.org/articles/ar-Ivorys-Curse-2014.pdf>.

³³ Michele S. Byers, *Byers: New Jersey First to Ban Ivory Trade*, NJ.com (Aug. 28, 2014), https://www.nj.com/hunterdon-county-democrat/index.ssf/2014/08/new_jersey_first_to_ban_ivory.html.

³⁴ Taylor Hill, *The Mammoth Problem With Selling an Extinct Animal’s Ivory*, TAKEPART (Aug. 31, 2015), <http://www.takepart.com/article/2015/08/31/wooly-mammoth-and-elephants-ivory-trafficking>; Steven Lee Myers, *Weaning Itself From Elephant Ivory, China Turns to Mammoths*, N.Y. TIMES (Aug. 6, 2017), <https://www.nytimes.com/2017/08/06/world/asia/china-elephant-mammoth-ivory.html>.

³⁵ Steven Lee Myers, *Weaning Itself From Elephant Ivory, China Turns to Mammoths*, N.Y. TIMES, note 34 above; Amos Chapple, *The Mammoth Pirates*, RADIOFREEEUROPE / RADIOLIBERTY (2016), <https://www.rferl.org/a/the-mammoth-pirates/27939865.html>.