

REVIEW

REPORTED WORLDWIDE OTTER ATTACKS ON HUMANS OVER THE LAST DECADE (2011-2021): DICTATED BY HUMAN ENCROACHMENT OR OTTER BEHAVIOR?

Jane MORGAN², Michael BELANGER¹, Carin WITTNICH^{1,2*}

¹*Oceanographic Environmental Research Society, 12 Burton Ave, Barrie, ON L4N2R2, Canada*

²*University of Toronto, Toronto, ON, M5S1A8, Canada*

*Corresponding author: Dr Carin Wittnich: e-mail: oersvet@gmail.com



(Received 14th November 2022, accepted 17th December 2022)

Abstract: Otter species populations are negatively impacted by human encroachment. This can result in habitat loss as well as close encounters with humans, which are often perceived by otters as a threat. Whether this results in otters attacking humans was confirmed in a historic review of worldwide reported incidences up to 2010. However, whether these incidences have escalated since then is unknown and lead to this current review (2011-2021). Otter attacks on humans were recorded geographically and chronologically in both wild and captive environments. The goal was to identify frequency and severity of these attacks and document human activities that may have triggered them. Over this 10-year period, this review identified 20 reports, 3 of which were in captive environments. Similar to the previous findings, the majority of attacks continue to be reported from North America, and more specifically the USA. Water related activities by humans were identified in 53% of such attacks, not surprising as this is the environment where otters primarily reside and hunt. Of the humans attacked, 59% were preventatively treated, of which, only two cases reported suspected rabid otters. Clearly there continues to be issues related to human encroachment on otter habitat that warrants continued monitoring and attention.

Citation: Morgan, J., Belanger, M., and Wittnich, C. (2023). Reported Worldwide Otter Attacks on Humans over the Last Decade (2011-2021): Dictated by Human Encroachment or Otter Behavior? *IUCN Otter Spec. Group Bull.* **40** (2): 80 - 89

Keywords: global, bite, scratch, temporal, activity, proximity

INTRODUCTION

In all animals, behaviors may be influenced by their niche, defined as the physical and environmental conditions they require to thrive, as well as interactions with other species. Therefore, it is important to understand otter's role in their ecosystem, which can help appreciate what could be at the root of any unexpected human-otter interactions. Some species of otters involved in human interactions include river otters in North America (*Lontra canadensis*) or Eurasia (*Lutra lutra*), Smooth-coated otter (*Lutrogale perspicillata*), and giant otter (*Pteronura brasiliensis*), each present in

different regions of the world (Groenendijk et al. 2021; Khoo et al., 2021; Loy et al 2022; Serfass 2021). River otters live in Eurasia (Loy et al 2022), North and Central America (Serfass 2021), Smooth-coated otters live in Southern Asia (Khoo et al., 2021), and giant otters live in northern central South America (Groenendijk et al. 2021). Commonly otters inhabit terrestrial, freshwater, and marine environments (Groenendijk et al. 2021; Khoo et al., 2021; Loy et al 2022; Serfass 2021). All species prey on fish, while each species will additionally hunt snakes, amphibians, turtles, and crustaceans (Groenendijk et al. 2021; Khoo et al., 2021; Loy et al 2022; Serfass 2021). River otters have an exceptionally diverse diet, where they occasionally hunt mice, birds, squirrels, and dogs (Loy et al 2022; Serfass 2021). Diets may be indicative of the otter's location, where otters may enter forests, open waters, or residential locations to hunt for food, and increase their human contact. In the wild, both the river and smooth coated otter live up to approximately 10 years (Khoo et al., 2021; Loy et al 2022; Serfass 2021), while the giant otter up to 13 years (Groenendijk et al. 2021; Wikipedia^a 2022). River otters breed December to April (Serfass 2021), while Smooth-coated otters breed year-round (Khoo et al., 2021), and giant otters July-September (Groenendijk et al. 2021). Each species gestation period is approximately 65 days. Invasive human activity into otter habitat may disrupt the otter's niche and initiate defensive behaviors in response to perceived threats, whether humans intend to harm otters or not.

With stressors such as climate change and the continued expansion of humans into wildlife habitat, the impact of these on both the humans and otters should be closely monitored and action taken to minimise such stressors. Specific threats that could impact otter populations include residential and commercial development, agriculture, aquaculture, biological resource use, natural system modifications, transportation, invasive species, disease, energy production, mining, climate change, and pollution (Groenendijk et al. 2021; Khoo et al., 2021; Loy et al 2022; Serfass 2021). All of such threats become increasingly severe with human population increase, due to associative increase in human dispersion, and demand for earth's resources. In the last decade, the world's population has risen by approximately 1 billion people (Wikipedia^d 2022), which could significantly increase encroachment into otter habitats, as well as worsen the other pre-existing threats to otter populations. Linked to this, otter populations continue to decrease, such that over the last 30 years, the smooth coated otter population has faced a decrease of 30%, and is expected to continue 30% more in the next 30 years (Khoo et al., 2021). The giant otter population has decreased more than 50% in the last 25 years, and is expected to continue to decrease another 50% in the next 25 years (Groenendijk et al. 2021). So not only are otters populations on a decline, but whether all these stressors could also result in negative interactions between humans and otters was confirmed in a worldwide historic review of documented otter attacks on humans, which found that majority of attacks involved the North American river otter, and occurred more often in Florida (Belanger, 2011). Furthermore, the review found that the greatest number of attacks were reported in the more recent years, indicating an escalation over time. Of the attacks, the report suggested that in 24-66% of cases, rabies was either confirmed or considered (Belanger, 2011). Additionally, the encroachment of expanding human populations into the otter's habitat appeared to be the leading cause for such defensive behavior (Belanger, 2011). Now, a decade later, to understand progression of previous findings, this review collected all reported human-otter attack information since 2010, with focus on attack quantity, severity, and geographic location. In assessing severity per attack, bite and scratch quantity, as well as associated medical treatment are compared. Additionally, this review will discuss the conditions

that are most indicative of attacks, species involved, victim qualities, and rabies occurrence.

MATERIALS AND METHODS

Data mining was conducted using internet resources utilizing terms including “otter attack” and “otter bite”. Any otter-human incidents were recorded from all scientific, academic, and public media platforms. Of the twenty reported attacks since 2011, 90% were sourced from public media. The scientific literature accounted for only 10% or a total of two reports. Each attack was reviewed for any duplication in reporting across sources. Any duplicated reports of the same attack were examined for additional information, and sourced accordingly. The geographic distribution of wild otter attack data can be seen in Table 1, while the chronological events are highlighted in Table 2. Table 3 contains the captive otter attack data. Captive attacks were recorded separately from those reported to have taken place in the wild, where 17 attacks occurred in the wild (Tables 1, 2), and 3 attacks occurred in captivity (Table 3).

RESULTS

Geographical distribution of the available wild otter attack reports included India, Canada, USA, Scotland, and Singapore (Table 1). India and Singapore were grouped as Asia for a geographical analysis. The USA had 9 times more reported wild attacks than Scotland, 3 times more than Canada, and 2.3 times more than Asia. Of the attacks reported in the USA, 44% occurred in Florida.

Species distribution of these attacks between river, Smooth-coated and giant otters found that river otters were present in the attacks in North America only, with none in England where many Eurasian otters reside. Unsurprisingly, smooth-coated otters were only found present in attacks in Asia, since this is where the species resides. Smooth coated otters are the only species reported to attack in groups of two or more otters, and as many as 20 otters present in one attack. There were no giant otter attacks reported in the wild, only in captivity (Tables 1, 3).

Table 1. Geographical distribution of otter attacks in the wild

| Date (ref) | Habitat | Otter (#) | Species | Victim Age (F/M) | Bite / Scratch | Treatment | Location | Activity |
|----------------------------|----------------|-----------|---------|------------------|-------------------------------------|----------------------------|---------------------------|-----------------------|
| July 2012 (Kalia) | Island Lake | 1 | RO | 31yr F | 25/- | Rabies Antibiotics | Canada (Manitoba) | Swim |
| August 2013 (Puri) | Greeny Lake | 1 | RO | Adult F | 9/- | - | Canada (British Columbia) | Swim |
| Summer 2016 (Cheng;Kirkey) | Lake | 1 | RO | 52yr F | y*/y *8 Sites 23 Punctures | Rabies Antibiotics Tetanus | Canada (Quebec) | Swim |
| September 2021 (Davenport) | Anchorage Pond | 1 | RO | 9yr M | y/- | Rabies Booster | USA (Alaska) | Filming at water edge |
| 2013 (Puri) | - | 1 | RO | 96yr M | -/- | - | USA (Florida - Venice) | - |
| March 2018 (Bever) | Braden River | 1 | RO | 77yr F Adult M | y/- | Rabies (s) | USA (Florida) | Kayak |
| February 2020 (Berkowitz) | House | 1 | - | Teen F Dog | y/- | Rabies (s) | USA (Florida) | Dog Chase |

| | | | | | | | | |
|----------------------------|-----------------------------|-------|-----|-------------------------|------|------------------------|-----------------------|--------------------------------|
| 2021 (Connolly) | Driveway | 1 | RO | Adult F | y/- | Rabies | USA (Florida) | Warming Otter |
| July 2013 (Moran) | Washington State River | 1 | - | 13yr F 11yr - | -/y | -- | USA (New York) | Swing Rope Swimming |
| July 2014 (Assoc Press) | Pilchuck River | 1 | - | 8yr M Old adult F | y/- | y | USA (Washington) | Swim |
| July 2021 (Hoyt) | Black Dan Lake | 1 | - | 12yr F | y/y | Rabies | USA (Wisconsin) | - |
| August 2021 (Adams) | Big Hole River | Group | - | 12yr M | y/- | Rabies Stitches | USA (Montana) | Floating Tubes |
| May 2017 (Barden) | Road | 1 | - | 24yr M | y/- | - | Scotland (Glasgow) | Forestry Work |
| June 2011 (Govind) | Thrissur Forest -pond | 1+ | SCO | 9yr M | y/- | Rabies | India (Kerala) | Playing in shallow water |
| September 2011 (Govind) | Vazhachal Forest canal | 1+ | SCO | 13yr M | y/- | Rabies | India (Kerala) | Crossing canal |
| May 2021 (O) | Kallang River | 20 | SCO | 77yr M | y/- | y | Singapore | Exercising near river |
| November 2021 (Cost) | Botanic Gardens River | Fam | SCO | Adult M | 26/- | Tetanus Antibiotics | Singapore | Walking near river |

Shaded reference = scientific source.

RO = River otter

SCO = Smooth-coated otter

- information not specified.

Y refers to "yes" but no further information was given.

(S) = suspected rabid animal (not confirmed).

Victims are human.

Captive otter attacks were only reported in the USA (Texas) and Europe (Germany) (Table 3). There were three such cases, all involved a giant otter, one in a zoo in Germany and the other two occurred in aquariums in Texas. Although there are smooth coated otters held in captive environments in the UK, as well as river otters in a number of facilities worldwide, no attacks on humans were reported from these captive species.

In comparison to the previous report that ended in 2010, across the 10-year (2011-2021) span examined (Table 2), the greatest number of reported otter-human attacks occurred in 2021. Seasonal variances were noted. Specifically, from January to December, the quantity of attack occurrence gradually increased, with peak attacks occurring in July, and decreasing gradually until December and January where there were no occurrences. When examining the captive data (Table 3), the attack at the German facility occurred in June, the other two in the USA (Texas) were in September and October.

The demographics of attack victims demonstrated that 53% of wild attacks involved youth under 20 years of age (Table 1), in comparison to 66% in captive attacks (Table 3). The severity of otter attacks can be assessed by contrasting the incidences when attacks involved scratches vs bites. For this report 88% of wild attacks involved bites vs 66% in captive attacks, clearly indicating significant severity. This was reinforced by the fact that when multiple bites were reported, they varied from 8 to as high as 26. Two attacks involved a suspected rabid animal but were not confirmed, while 59% of wild attack victims were treated preventatively against rabies, and 24%

of wild attack victims were treated further with antibiotics, tetanus, and/or stitches. For the captive events, there was only one case where the victim was preventatively treated for rabies.

Table 2. Chronological distribution of otter attacks in the wild

| Date (ref) | Location | Habitat | Otter (#) | Species | Victim Age (F/M) | Bite/Scratch | Treatment | Activity |
|-----------------------------|---------------------------|------------------------|-----------|---------|----------------------|----------------------------------|----------------------------------|---------------------------|
| 2011 June (Govind) | India (Kerala) | Thrissur Forest-pond | 1+ | SCO | 9yr M | y/- | Rabies | Playing - shallow water |
| 2011 September (Govind) | India (Kerala) | Vazhachal Forest canal | 1+ | SCO | 13yr M | y/- | Rabies | Crossing canal |
| 2012 July (Kalia) | Canada (Manitoba) | Island Lake | 1 | RO | 31yr F | 25/- | Rabies Antibiotics | Swim |
| 2013 July (Moran) | USA (New York) | Washington State River | 1 | - | 13yr F 1 yr - | -/y | - | Swing Rope Swimming |
| 2013 August (Puri) | Canada (British Columbia) | Greeny Lake | 1 | RO | Adult F | 9/- | - | Swim |
| 2013 (Puri) | USA (Florida - Venice) | - | 1 | RO | 96yr M | -/- | - | - |
| 2014 July (Assoc. Press) | USA (Washington) | Pilchuck River | 1 | - | 8yr M Old adult F | y/- | y | Swim |
| 2016 Summer (Cheng; Kirkey) | Canada (Quebec) | Lake | 1 | RO | 52yr F | y*/y *8 Sites 23 Punctures | Rabies Antibiotics Tetanus | Swim |
| 2017 May (Barden) | Scotland (Glasgow) | Road | 1 | - | 24yr M | y/- | - | Forestry work |
| 2018 March (Bever) | USA (Florida) | Braden River | 1 | RO | 77yr F Adult M | y/- | Rabies (S) | Kayak |
| 2020 February (Berkowitz) | USA (Florida) | House | 1 | - | Teen F Dog | y/- | Rabies (S) | Dog chase |
| 2021 May (O) | Singapore | Kallang River | 20 | SCO | 77yr M | y/- | y | Exercising near river |
| 2021 July (Hoyt) | USA (Wisconsin) | Black Dan Lake | 1 | - | 12yr F | y/y | Rabies | - |
| 2021 August (Adams) | USA (Montana) | Big Hole River | Group | - | 12yr M | y/- | Rabies Stitches | Floating tubes |
| 2021 September (Davenport) | USA (Alaska) | Anchorage Pond | 1 | RO | 9yr M | y/- | Rabies Booster | Filming at water edge |
| 2021 November (Cost) | Singapore | Botanic Gardens River | Family | SCO | Adult M | 26/- | Tetanus Antibiotics | Walking near river |
| 2021 (Connolly) | USA (Florida) | Driveway | 1 | RO | Adult F | y/- | Rabies | Warming Otter |

Shaded reference = scientific source.
RO = River otter
SCO = Smooth-coated otter
- information not specified.
Y refers to “yes” but no further information was given.
(S) = suspected rabid animal (not confirmed).
Victims are human.

Table 3. Chronological distribution of captive otter attacks

| Date [ref] | Location | Habitat | Otter (#) | Species | Victim age (F/M) | Bite/Scratch | Treatment | Activity |
|-------------------------|-------------------|----------|-----------|---------|------------------|--------------|-----------|--------------------------|
| 2012 June (W,JC) | Germany (Hamburg) | Zoo | 1 | GO | 56yr (F) | y/- | y | Cleaning bench |
| 2019 September (Marfin) | USA (Texas) | Aquarium | 1 | GO | 2yr (F) | y/- | Rabies | Child on parent shoulder |
| 2021 October (NBCDFW) | USA (Texas) | Aquarium | 1 | GO | 18mo (M) | -/y | - | Lifted to Otter |

–information not specified.

GO = Giant otter.

Y refers to “yes” but no further information was given.

F: female; M: male. Victims are human.

The reported activities by the humans at the time of the wild attacks varied (Table 2) but revealed that 53% were directly water related. Specifically, 29% of wild attacks occurred while the victim was swimming with the other 24% involving ‘on water’ activities such as kayaking or tubing. In addition, 18% were activities beside the waters edge such as exercising or photography. Interestingly, ~12% occurred in residential environment, one attack (5%) occurred in a forest, while another ~12% did not provide any details.

DISCUSSION

Geographical findings of the otter attacks mimicked those from the 2011 review (Belanger, 2011), where most were found in North America, many occurring in Florida. Similarly, like the previous review, not surprisingly, most of the attacks took place in environments nearest to water including rivers, lakes, and a pond. Forests and lakes are commonly explored by humans, who are exercising, adventuring, spending time at the cottage, residential, or occupational activities. Otters commonly also live in such areas, therefore setting up the situation for a potential attack to occur when the human enters the vicinity of the otter’s homeland. Approaching the vicinity of the otter’s territory may occur in either of residential expansion in association with human population growth and dispersion, as well as the aforementioned recreational activities, both of which lead to encroachment of people into otter’s habitats. River otters, who account for almost half of all wild otter attacks in Canada and the USA, reside across large and small bodies of water including lakes. Smooth-coated otters found in Asia, reside in large and small wooded areas near rivers including forests and are the only species reported to have attacked in groups of 2 or more. Though all otter species are social, and prefer to live in groups, the smooth coated otter species requires a group specific formation to hunt (Ladds et al., 2017). This method of hunting is used in smooth coated otter groups of up to 11 otters (Wikipedia^c, 2022), and especially in a V shape formation when swimming up stream (World Wildlife Fund – India, n.d.). This may be why the Smooth-coated otter was the only species for which attacks in groups were reported.

As well, wetlands have dramatically declined worldwide in the last few decades and continue to do so (World Wildlife Fund, 2018). With the decline of otter habitats, otter populations are forced beyond their familiar environments, and into proximity of humans, leading to increased human encroachment, threats, and attacks. It was notable that England was the only country where otters are found in abundance that had no attacks reported. They have enforced strict otter protection regulations for otter

conservation perhaps explaining the lack of reported attacks, as human encroachment might be minimized by these regulations (Natural England, 2011).

Seasonal conditions are also likely associated with attack frequency, as observed by the lack of reported attacks in October to April. Possibly the mid-year months of May-September, when summer weather is prevalent, increases the likelihood of humans coming in contact with otters more frequently. As well, based on December-April breeding season, the 67% of river otter attacks during the months of July-September are also when young pups would be under protection of parent otters and human presence viewed as an even greater threat (Serfass, 2021).

Over half of human victims were under the age of 20 and female. The youth unawareness of surroundings may contribute to more invasively unaware activity. As well, the fact that most victims were bitten more than once, suggests defense behavior rather than just a warning. Interestingly, in this current review, preventative measures were taken in over half of the cases. It is possible that, though there were no deaths, the overall severity of attacks has increased such that medical attention was required.

In captivity, it would have been anticipated that the otter handlers would be attack victims in transporting and caring for the animals, not the public. Surprisingly, of attacks reported involved victims in captive environments, none were otter handlers. In the aquarium/zoo captive environment, there were only a few reports of attacks, and those were all with giant otters. Facilities that hold this species can be found in England, Germany and the USA (Wright, 2010), yet only the latter 2 countries had any reports of attacks. River otters are kept in captive environments in the USA, and Canada, however no reports of any attacks were found for this species in captivity (Smithsonian Natural Zoo & Conservation Biology Institute, n.d.; Toronto Zoo, n.d.). Smooth coated otters are also kept in captivity in England but also no reports of captive attacks were found (Wingham Wildlife Park, n.d.). Additionally, one would have anticipated wildlife rescue groups would have been a higher risk of otter attacks during retrieval, however, none were found in this subgroup anywhere in the world. It is possible such events go unreported as it is expected as part of rescuing and handling the otters, or that the staff are properly trained for handling the otters with care.

Finally, reports were predominantly recorded in media rather than scientific literature. Of attacks reported across all platforms, there are likely cases which go unreported, whether due to insignificance of injury, or an unwillingness to publicize such an event and this unfortunately is one limitation of the findings reported herein.

CONCLUSION

Otters will defend themselves if they feel threatened, as observed in the reported attacks. Human encroachment into otter habitat will obviously increase especially in the face of an increase of 1 billion people since 2011. Evidence for this encroachment is the fact that in 53% of wild attack cases, the human victim was engaged in a water related activity. Geographic distribution of the reports of such wild attacks was heavily weighted (71%) to North America, with just over half in the USA, more specifically 44% of which were in Florida. Seasonal effects on the frequency of attacks was also noted, peaking in July. A small number (15%) of attacks were in captive environments, where unexpectedly the victims were not otter handlers but the public. It is obvious that the incidences of otter attacks has not diminished since the previous report and that human encroachment is at the root of most attacks. Clearly as humans are increasingly coming in contact with otters, the public needs to be aware of otter habitat conservation and behaviors to reduce threats to otters to reduce or hopefully prevent further attacks.

REFERENCES

- Adams, D. (2021).** Not your average mauling: Otter attacks Butte boy on Big Hole River. *The Montana Standard*. https://mtstandard.com/news/local/not-your-average-mauling-otter-attacks-butte-boy-on-big-hole-river/article_db956941-d4bc-593d-8a96-679896bb24d6.html Last accessed on: November 9th, 2022.
- Associated Press. (2014).** Otter attacks swimmers in Washington river. *Deseret News*. <https://www.deseret.com/2014/8/1/20469175/otter-attacks-swimmers-in-washington-river> Last accessed on: November 9th, 2022.
- Barden, D. (2017).** The Moment An Angry Otter Hunts Down And Attacks A Scotsman. *HUFFPOST*. https://www.huffpost.com/archive/au/entry/the-moment-an-angry-otter-hunts-down-and-attacks-a-scotsman_a_22094475 Last accessed on: November 9th, 2022.
- Belanger, M., Clough, N., Askin, N., Tan, L. and Wittnich, C. (2011).** A Review of Violent or Fatal Otter Attacks. *IUCN Otter Spec. Group Bull.* **28** (1): 11 - 16
https://www.iucnosgbull.org/Volume28/Belanger_et_al_2011.html Last accessed on: May 23rd, 2023.
- Berkowitz, K. L. (2020).** Lakeland family fights off otter in their home. *The Ledger*. <https://www.theledger.com/story/news/environment/2020/02/11/lakeland-family-fights-off-otter-attack-in-their-home/1718176007/> Last accessed on: November 9th, 2022.
- Bever, L. (2018).** Kayaker victim of 'very un-otter-like behaviour'. *The Washington Post*. <https://www.thestar.com/life/2018/03/13/kayaker-victim-of-very-un-otter-like-behaviour.html> Last accessed on: November 9th, 2022.
- Cheng, M. P., Parkes, L. O., Paquette, K., Yansouni, C. P., & Lee, T. C. (2016).** River otter bite in a 52-year-old woman: managing animal bites. *Canadian Medical Association Journal (CMAJ)*, 188(17-18), E513–E516. <https://www.cmaj.ca/content/188/17-18/E513> Last accessed on: November 9th, 2022.
- Connolly, K. (2021).** Rabid Otter Attacks Orlando Woman Who Placed a Blanket on the Critter. *Spectrum News*. <https://www.mynews13.com/fl/orlando/news/2021/01/02/rabid-otter-attacks-orlando-woman-after-placing-blanket-on-critter/> Last accessed on: November 9th, 2022.
- Cost, B. (2021).** Man attacked by 20 otters, bitten 26 times 'I thought I was going to die'. *New York Post*. <https://nypost.com/2021/12/10/man-attacked-by-gang-of-otters-i-thought-i-was-going-to-die/> Last accessed on: January 4th, 2023.
- Davenport, S. (2021).** River otter attacks 9-year-old boy at east anchorage pond. *Anchorage Daily News*. <https://www.adn.com/alaska-news/wildlife/2021/09/05/river-otter-attacks-9-year-old-boy-at-east-anchorage-pond/> Last accessed on: November 9th, 2022.
- Govind, SK and Jayson, EA (2018).** Attack of Otter on Humans in Thrissur, Kerala, India. *IUCN Otter Spec. Group Bull.* **35** (1): 57 - 61
https://www.iucnosgbull.org/Volume35/Govind_Jayson_2018.html Last accessed on: May 23rd, 2023.
- Groenendijk, J., Marmontel, M., Van Damme, P., Schenck, C., & Wallace, R. (2021).** *Pteronura brasiliensis*. *The IUCN Red List of Threatened Species*.
<https://www.iucnredlist.org/species/18711/164580466#assessment-information> Last accessed on: November 9th, 2022.
- Hoyt, S. (2021).** Otter attacks girl and her father in Sawyer County, sending both to the hospital. *WQOW*. https://www.wqow.com/news/otter-attacks-girl-and-her-father-in-sawyer-county-sending-both-to-the-hospital/article_b0e19c5d-e5ac-589a-9cce-904abb783809.html Last accessed on: November 9th, 2022.
- Kalia, A. (2022).** 'I saw a big set of white teeth coming towards me': the people who survived terrifying wild animal attacks. *The Guardian*.
<https://www.theguardian.com/environment/2022/jan/04/saw-big-set-of-white-teeth-coming-towards-me-people-who-survived-wild-animal-attacks> Last accessed on: November 9th, 2022.
- Khoo, M., Basak, S., Sivasothi, N., De Silva, P. K., & Reza Lubis, I. (2021).** *Lutrogale perspicillata*. *The IUCN Red List of Threatened Species*.
<https://www.iucnredlist.org/species/12427/164579961> Last accessed on: November 9th, 2022.
- Kirkey, S. (2016).** 'Nature can bite back': Doctors warn of otter attacks after one viciously punctures Quebec woman. *National Post, Canada*. <https://nationalpost.com/news/canada/doctors-warn-of-otter-attacks-after-one-viciously-punctures-quebec-woman> Last accessed on: November 9th, 2022.
- Ladds, Z., Hoppitt, W., & Boogert, N. J. (2017).** Social learning in otters. *Royal Society Open Otters*.
<https://royalsocietypublishing.org/doi/10.1098/rsos.170489> Last accessed on: November 9th, 2022.

- Loy, A., Kranz, A., Oleynikov, A., Roos, A., Savage, M. & Duplaix, N. (2022).** *Lutra lutra*. *The IUCN Red List of Threatened Species* 2022: e.T12419A218069689. <https://dx.doi.org/10.2305/IUCN.UK.2022-2.RLTS.T12419A218069689.en> Accessed on 31 December 2022
- Marfin, C. (2022)** Dallas World Aquarium hit with another lawsuit alleging attack by giant otter on a young child. *The Dallas Morning News*. <https://www.dallasnews.com/news/courts/2022/02/11/dallas-world-aquarium-hit-with-another-lawsuit-alleging-attack-by-giant-otter-on-a-young-child/> Last accessed on: November 9th, 2022.
- Moran, L. (2013).** Teens savagely attacked by wild river otter describe it as a scene out of ‘Jaws’. *Daily News*. <https://www.nydailynews.com/news/national/teens-recall-otter-attack-article-1.1411469> Last accessed on: November 9th, 2022.
- Natural England Species Information (2011).** Otter: European protected species. https://www.lbp.org.uk/downloads/Publications/SpeciesInfo/NE_EU_otter.pdf Last accessed on: November 9th, 2022.
- NBCDFW. (2021).** Woman Sues Dallas World Aquarium After She Says Son Attacked by Giant Otter. *Dallas World Aquarium*. <https://www.nbcdfw.com/news/local/woman-sues-dallas-world-aquarium-after-she-says-son-attacked-by-giant-otter/2777148/> Last accessed on: November 9th, 2022.
- O, H. (2021).** Elderly man attacked by otter along Kallang River, warns others of potential danger. *The Independent*. <https://theindependent.sg/elderly-man-attacked-by-otter-along-kallang-river-warns-others-of-potential-danger/> Last accessed on: November 9th, 2022.
- Puri, B. (2013).** River otter attacks woman in B.C. lake. *CBC News, British Columbia*. <https://www.cbc.ca/news/canada/british-columbia/river-otter-attacks-woman-in-b-c-lake-1.1324505> Last accessed on: November 9th, 2022.
- Serfass, T. (2021).** *Lontra canadensis*. *The IUCN Red List of Threatened Species*. <https://www.iucnredlist.org/species/12302/164577078> Last accessed on: November 9th, 2022.
- Smithsonian’s National Zoo & Conservation Biology Institute (n.d.).** North American River Otter. <https://nationalzoo.si.edu/animals/north-american-river-otter> Last accessed on: November 9th, 2022.
- Toronto Zoo (n.d.).** North American River Otter. <https://www.torontozoo.com/animals/North%20American%20River%20Otter> Last accessed on: November 9th, 2022.
- Wingham Wildlife Park. (n.d.).** Smooth Coated Otter. <https://winghamwildlifepark.co.uk/animal/smooth-coated-otter/> Last accessed on: November 9th, 2022.
- Wikipedia contributors^a. (2022).** Giant otter. In *Wikipedia, The Free Encyclopedia*. https://en.wikipedia.org/w/index.php?title=Giant_otter&oldid=1073653509 Last accessed on: November 9th, 2022.
- Wikipedia contributors^b. (2022).** North American river otter. In *Wikipedia, The Free Encyclopedia*. https://en.wikipedia.org/w/index.php?title=North_American_river_otter&oldid=1070801664 Last accessed on: November 9th, 2022.
- Wikipedia contributors^c. (2022).** Smooth-coated otter. In *Wikipedia, The Free Encyclopedia*. https://en.wikipedia.org/w/index.php?title=Smooth-coated_otter&oldid=1072491407 Last accessed on: November 9th, 2022.
- Wikipedia contributors^d. (2022).** World population. In *Wikipedia, The Free Encyclopedia*. https://en.wikipedia.org/w/index.php?title=World_population&oldid=1100337367 Last accessed on: November 9th, 2022.
- W,J.C.** Cleaner in hospital after giant otter attack. *The Local*. <https://www.thelocal.de/20120608/43035/> Last accessed on: November 9th, 2022.
- World Wildlife Fund. (2018).** World’s wetlands disappearing three times faster than forests. https://wwf.panda.org/wwf_news/?335575/Worlds-wetlands-disappearing-three-times-faster-than-forests Last accessed on: November 9th, 2022.
- World Wildlife Fund, India. (n.d.).** Smooth-coated otter. https://www.wwfindia.org/about_wwf/priority_species/threatened_species/smooth_coated_otter/ Last accessed on: November 9th, 2022.
- Wright, L. C. (2010).** Giant Otters in Captivity. *Otter Joy*. https://www.otterjoy.com/otterinfo/pteronura/brasiliensis/brasiliensis_captive.html Last accessed on: November 9th, 2022.

RESUME

LES ATTAQUES DE LOUTRES SUR L'HOMME SIGNALÉES AU NIVEAU MONDIAL AU COURS DES DIX DERNIÈRES ANNEES (2011-2021) SONT-ELLES DICTÉES PAR L'EXPANSION DE L'HOMME OU LE COMPORTEMENT DE LA LOUTRE?

Les populations d'espèces de loutres subissent les effets négatifs de l'expansion humaine. Cela peut entraîner une perte d'habitat ainsi que des rencontres proches de l'homme, qui sont souvent perçues par les loutres comme une menace. Si ces observations de loutres attaquant l'homme ont été confirmées dans une étude historique des incidents signalés dans le monde entier jusqu'en 2010. Cependant, on ne sait pas si ces incidents se sont intensifiés depuis lors, ce qui a conduit à l'étude actuelle (2011-2021). Les attaques de loutres contre les humains ont été enregistrées géographiquement et chronologiquement dans des environnements sauvages et captifs. L'objectif était d'identifier la fréquence et la gravité de ces attaques et de documenter les activités humaines susceptibles de les avoir déclenchées. Au cours de cette période de 10 ans, cette étude a identifié 20 attaques, dont 3 en milieu captif. Conformément aux conclusions précédentes, la majorité des attaques continuent d'être signalées en Amérique du Nord, et plus particulièrement aux États-Unis. Des activités humaines liées à l'eau ont été identifiées dans 53% de ces attaques, ce qui n'est pas surprenant, dans la mesure où c'est un environnement où les loutres vivent et chassent principalement. Parmi les attaques sur l'homme, 59% ont été traitées de manière préventive, et parmi celles-ci, il y avait seulement deux cas de loutres suspectées d'être enragées. De toute évidence, il continue d'y avoir des problèmes liés à l'expansion de l'homme dans l'habitat de la loutre qui justifient une surveillance et une attention continues.

RESUMEN

ATAQUES DE NUTRIAS A HUMANOS INFORMADOS MUNDIALMENTE A LO LARGO DE LA ÚLTIMA DÉCADA (2011-2021): ¿DICTADOS POR LA OCUPACIÓN HUMANA Ó POR EL COMPORTAMIENTO DE LAS NUTRIAS?

Las poblaciones de especies de nutrias son impactadas negativamente por la ocupación humana. Ésto puede resultar en pérdida de hábitat, así como en encuentros cercanos con los humanos, que a menudo son percibidos por las nutrias como una amenaza. Que ésto resulta en que las nutrias ataquen a los humanos, fue confirmado en una revisión histórica de las incidencias reportadas mundialmente, hasta 2010. Sin embargo, no se sabe si éstas incidencias han escalado desde entonces, lo que motivó la presente revisión (2011-2021). Registramos geográfica y cronológicamente los ataques de nutrias a humanos, tanto en ambientes silvestres como en cautiverio. De manera similar a los hallazgos previos, la mayoría de los ataques continúan siendo informados en Norte América, y más específicamente los EEUU. En el 53% de esos ataques, fueron identificadas actividades de los humanos relacionadas con el agua, lo que no sorprende ya que éste es el ambiente en el cual las nutrias primariamente residen y cazan. De los humanos atacados, el 59% fue tratado preventivamente, y de éstos, en solamente dos casos se reportó sospecha de nutrias con rabia. Claramente, continúa habiendo incidentes relacionados con la ocupación humana de los hábitats de las nutrias, lo que requiere de monitoreo y atención continuada.