

DAFTAR PUSTAKA

- Afrizal, D., Rustiati, E. L., & Syahri, B. F. (2018). Teknik Pengamatan Pola Pergerakan Gajah Sumatera (*Elephas maximus sumatranus*) dengan Teknologi GPS Collar Di Hutan Lindung Register 39 KPH IX Kota Agung Utara. In *Seminar Nasional Hasil-Hasil Penelitian*.
- Aliando, A., Prayoga, W., & Imron, M. A. (2021). Keragaman Jenis dan Kondisi Habitat Herpetofauna Paska Kebakaran di Taman Nasional Tesso Nilo-Riau. *Jurnal Ilmu Kehutanan*, 15 (2). <https://doi.org/10.22146/jik.v15i2.1799>
- Baotic, A., Garcia, M., Boeckle, M., & Stoeger, A. (2018). Field propagation experiments of male african savanna elephant rumbles: A focus on the transmission of formant frequencies. *Animals*, 8(10). <https://doi.org/10.3390/ani8100167>
- Beeck, V. C., Heilmann, G., Kerscher, M., & Stoeger, A. S. (2021). A novel theory of Asian elephant high-frequency squeak production. *BMC Biology*, 19(1). <https://doi.org/10.1186/s12915-021-01026-z>
- Berg, J. K. (1983a). Vocalizations and Associated Behaviors of the African Elephant (*Loxodonta africana*) in Captivity. *Zeitschrift Für Tierpsychologie*, 63(1), 63–79. <https://doi.org/10.1111/j.1439-0310.1983.tb00741.x>
- Berg, J. K. (1983b). Vocalizations and Associated Behaviors of the African Elephant (*Loxodonta africana*) in Captivity. *Zeitschrift Für Tierpsychologie*, 63(1), 63–79. <https://doi.org/10.1111/j.1439-0310.1983.tb00741.x>
- Browning, E., Gibb, R., Glover-Kapfer, P., Jones, K. E., Billington, G., Burivalova, Z., Clink, D., de Ridder, J., Halls, J., Hastings, T., Jacoby, D., Kalan, A., Kershenbaum, A., Linke, S., Lucas, S., Machado, R., Owens, P., Sutter, C., Trethowan, P., ... Wrege, P. (2017). Conservation Technology: Acoustic Monitoring. In *WWF Conservation Technology Series* (Issue 2). WWF-UK.
- Camuffo, D. (2014). Measuring Wind and Indoor Air Motions. In *Microclimate for Cultural Heritage* (pp. 471–491). Elsevier. <https://doi.org/10.1016/b978-0-444-63296-8.00014-7>
- Clark, C. W., Charif, R., Mitchell, S., & Colby, J. (1996). Distribution and behavior of the bowhead whale, *Balaena mysticetus*, based on analysis of acoustic data collected during the 1993 spring migration off Point Barrow, Alaska. *Forty-Sixth Report of the International Whaling Commission*, 541–552.
- Collins, N. J. (2018). *Sumatran elephant *Elephas maximus sumatranus* density and habitat use in relation to forest characteristics in the Leuser Ecosystem, North Sumatra* (Issue January). Bournemouth University.
- Connel, C. (1997). Seismic transmission of elephant vocalizations and movement. *The Journal of the Acoustical Society of America*.
- de Silva, S. (2010). Acoustic communication in the Asian elephant, *Elephas maximus maximus*. *Behaviour*, 147(7), 825–852. <https://doi.org/10.1163/000579510X495762>

- Deichmann, J. L., Hernández-Serna, A., Delgado C., J. A., Campos-Cerqueira, M., & Aide, T. M. (2017). Soundscape analysis and acoustic monitoring document impacts of natural gas exploration on biodiversity in a tropical forest. *Ecological Indicators*, 74, 39–48. <https://doi.org/10.1016/j.ecolind.2016.11.002>
- Djoko, G., & Ameliya, R. (2009). Pendugaan Populasi Harimau Sumatra dan Satwa Mangsanya di Taman Nasional Bukit Barisan Selatan. *Biosfera*, 26(1), 1–7.
- Doelle, L. (1972). *Akustik Lingkungan*. McGraw-Hill, Inc.
- Downer, A. (2011). *Elephant Talk: The Surprising Science of Elephant Communication*. Twenty-First Century Books.
- ElephantVoices. (n.d.). *Elephant Communication*. Retrieved May 24, 2022, from <https://www.elephantvoices.org/elephant-communication/acoustic-communication.html>
- Farina, A. (2014). *Soundscape Ecology: Principles, Patterns, Methods and Applications*. Springer.
- Fink, D. (2019). A new definition of noise: Noise is unwanted and/or harmful sound. Noise is the new “secondhand smoke.” *Proceedings of Meetings on Acoustics*, 39(1). <https://doi.org/10.1121/2.0001186>
- Fitch, T. (2006). Production vocalization mammals. In *Elovier*.
- Garstang, M. (2004). Long-distance, low-frequency elephant communication. *J Comp Physiol A*, 791–805. <https://doi.org/10.1007/s00359-004-0553-0>
- Garstang, M. (2010). Elephant infrasounds: Long-range communication. In *Handbook of Behavioral Neuroscience* (Vol. 19, Issue C). Elsevier B.V. <https://doi.org/10.1016/B978-0-12-374593-4.00007-3>
- Harsangka, A. H. (2013). *Ketersediaan Pakan Alami dan Implikasinya terhadap Konflik Gajah Manusia di Taman Nasional Way Kambas*. Universitas Gadjah Mada.
- Haryadi, Y. (2020). *Komparasi Penggunaan Passive Acoustic Monitoring dan Point Counts untuk Survei Biodiversitas Avifauna di Hutan Kemuning, Temanggung, Jawa Tengah*. Universitas Gadjah Mada.
- Hedwig, D., DeBellis, M., & Wrege, P. H. (2018a). Not so far: attenuation of low-frequency vocalizations in a rainforest environment suggests limited acoustic mediation of social interaction in African forest elephants. *Behavioral Ecology and Sociobiology*, 72(3). <https://doi.org/10.1007/s00265-018-2451-4>
- Hedwig, D., DeBellis, M., & Wrege, P. H. (2018b). Not so far: attenuation of low-frequency vocalizations in a rainforest environment suggests limited acoustic mediation of social interaction in African forest elephants. *Behavioral Ecology and Sociobiology*, 72(3). <https://doi.org/10.1007/s00265-018-2451-4>
- Herler, A., & Stoeger, A. S. (2012). Vocalizations and associated behaviour of Asian elephant (*Elephas maximus*) calves. *Behaviour*, 149(6), 575–599. <https://doi.org/10.1163/156853912x648516>

- IELC. (2021). *Physical Characteristics - African Elephants (*Loxodonta africana* and *L. cyclotis*) Fact Sheet - LibGuides at International Environment Library Consortium*.
https://ielc.libguides.com/sdzg/factsheets/african_elephant/characteristics
- Ippi, S., Vasquez, R. A., van Dongen, W. F. D., & Lazzoni, I. (2011). Geographical variation in the vocalizations of the suboscine Thorn-tailed Rayadito *Aphrastura spinicauda*. *The International Journal of Avian Science*, 153.
- Koch, R. (2016). *Swift Recorder Users Guide*. Cornell University.
- Kunc, H. P., Amrhein, V., & Naguib, M. (2006). Vocal interactions in nightingales, *Luscinia megarhynchos*: more aggressive males have higher pairing success. *Animal Behaviour*, 72(1), 25–30. <https://doi.org/10.1016/j.anbehav.2005.08.014>
- Kurniati, H., & Hamidy, A. (2016). Variasi Suara Panggilan Kodok *Hylarana nicobariensis* (Stoliczka, 1870) Dari Lima Populasi Berbeda di Indonesia (Anura: Ranidae). *Jurnal Biologi Indonesia*, 12(2), 165–173.
- Kuswanda, W. (2017). Diversity and determination of wildlife ‘umbrella species’ in the Gunung Leuser National Park. *Jurnal Penelitian Kehutanan Wallacea*, 6(2), 113. <https://doi.org/10.18330/jwallacea.2017.vol6iss2pp113-123>
- Langbauer, W. R. (2000). Elephant Communication. In *Zoo Biology* (Vol. 19).
- Langbauer, W. R., Payne, K. B., Charif, R. A., Rapaport Lisa, & Osborn, F. (1991). African Elephants Respond to Distant Playbacks of Low-Frequency Conspecific Calls. *Journal of Experimental Biology*, 157(1), 35–46. <https://doi.org/10.1242/jeb.157.1.35>
- Maida, S., & Sukandar, P. (2016). Variasi Struktur Vokalisasi Owa Jawa (*Hylobates moloch* Audebert, 1798) Di Hutan Lindung Petungkriyono, Pekalongan, Jawa Tengah. *Bioma*, 12(1), 40–49.
- Marten, K., Marler, P., Marten, K., & Marler, P. (1977). Sound Transmission and Its Significance for Animal Vocalization. *Behav, Ecol. Sociobiol*, 2, 271–290.
- Mellinger, D. K., Stafford, K. M., Moore, S. E., Dziak, R. P., & Matsumoto, H. (2007). An overview of fixed passive acoustic observation methods for Cetaceans. *Oceanography*, 20(SPL.ISS. 4), 36–45. <https://doi.org/10.5670/oceanog.2007.03>
- Morton, E. S. (1977). On the Occurrence and Significance of Motivation-Structural Rules in Some Bird and Mammal Sounds. In *Source: The American Naturalist* (Vol. 111, Issue 981). <https://about.jstor.org/terms>
- Mossbrucker, A. (2021). *Island Elephants The Giants of Sumatra*. International Elephant Project.
- Nair, S., Balakrishnan, R., Seelamantula, C. S., & Sukumar, R. (2009). Vocalizations of wild Asian elephants (*Elephas maximus*): Structural classification and social context. *The Journal of the Acoustical Society of America*, 126(5), 2768–2778. <https://doi.org/10.1121/1.3224717>

- Noon, B. R. (1981). Techniques for sampling avian habitats. In *The use of multivariate statistics in studies of wildlife habitat*. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station.
- OAD. (2022). *Audiomoth Operation Manual*. Open Acoustic Device.
www.openacousticdevices.info/support
- Pardo, M. A., Poole, J. H., Stoeger, A. S., Wrege, P. H., O'Connell-Rodwell, C. E., Padmalal, U. K., & de Silva, S. (2019). Differences in combinatorial calls among the 3 elephant species cannot be explained by phylogeny. *Behavioral Ecology*, 30(3), 809–820.
<https://doi.org/10.1093/beheco/arz018>
- Pavan, B. G., & Pavia, U. (2008). *Short field course on bioacoustics Bioacoustics Underwater Bioacoustics Soundscapes Bioacoustics for Taxonomy*. September, 1–15.
- Rahmi, J. (2009). Hubungan kerapatan tajuk dan penggunaan lahan berdasarkan analisis citra satelit dan sistem informasi geografis di taman nasional gunung leuser (Studi kasus Kawasan Hutan Resort Tangkahan, Cinta Raja, Sei Lapan dan Kawasan Ekosistem Leuser). *Skripsi, Universitas Sumatera Utara*.
- Resiana, F., Lubis, M. S., & Siahaan, S. (2015). Efektivitas Penghalang Vegetasi sebagai Peredam Kebisingan Lalu Lintas. *Jurnal Teknologi Lingkungan Lahan Basah*.
- Rodwell, C. E. O. (2007). Signal Propagation Seismic Signal Detection Behavior. *PHYSIOLOGY*, 22. www.physiologyonline.org
- Rusfidra, A. (2006). Pengembangan Riset Bioakustik di Indonesia : Studi pada Ayam Kokok Balenggek , Ayam Pelung dan Ayam Bekisar. *Seminar National on Mathematics and Natural Sciences, Yogyakarta State University 2006*, 353–372.
- Russ, J. (2013). *British Bat Calls: A Guide to Species Identification*. Pelagic Publishing.
- Seddeq, H. S., Aly, N. M., Marwa A, A., & Elshakankery, M. H. (2013). Investigation on sound absorption properties for recycled fibrous materials. *Journal of Industrial Textiles*, 43(1), 56–73. <https://doi.org/10.1177/1528083712446956>
- Stafford, K. M., Nieuirk, S. L., & Fox, C. G. (1999). Low-frequency whale sounds recorded on hydrophones moored in the eastern tropical Pacific. *The Journal of the Acoustical Society of America*, 106(6), 3687–3698. <https://doi.org/10.1121/1.428220>
- Stoeger, A. S., & de Silva, S. (2014). African and asian elephant vocal communication: A cross-species comparison. *Biocommunication of Animals*, 9789400774148, 21–39.
https://doi.org/10.1007/978-94-007-7414-8_3
- Teixeira, D., Maron, M., & Rensburg, B. J. (2019). Bioacoustic monitoring of animal vocal behavior for conservation. *Conservation Science and Practice*, 1(8).
<https://doi.org/10.1111/csp2.72>
- UCAR. (2018). *Wavelength*. <https://scied.ucar.edu/learning-zone/atmosphere/wavelength#:~:text=The%20frequency%20of%20a%20wave,have%20very%2C%20very%20short%20wavelengths.>



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Deteksi Vokalisasi Gajah Sumatra (*Elephas maximus sumatranus*) menggunakan Passive Acoustic Monitoring di Resort Tangkahan, Taman Nasional Gunung Leuser
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World Wildlife. (2017). *Sumatran Elephant*.

<https://www.worldwildlife.org/species/sumatran-elephant>