

REFERENCE

- Adams, C. I. M., M. Knapp, N. J. Gemmell, G. J. Jeunen, M. Bunce, M. D. Lamare and H. R. Taylor. 2019. Beyond Biodiversity: Can Environmental DNA (eDNA) Cut It as A Population Genetics Tool? *Genes.* 10(3):192.
- Bergstrom, D. E. 2001. Haplotype. In S. Brenner and J. H. Miller (Eds.), *Encyclopedia of Genetics* (pp. 911-912).
- Blaxter, M. 2003. Molecular systematics: Counting angels with DNA. *Nature* 421: 122-124.
- Brändén, G., R. B. Gennis and P. Brzezinski. 2006. Transmembrane proton translocation by cytochrome c oxidase. *Biochimica Biophys Acta (BBA)*. 8: 1052-1063.
- Burland, T. G. 2000. DNASTAR's Lasergene Sequence Analysis Software. *Methods Mol Biol* 132: 71-91.
- Chaves, P. B., V.G. Graeff, M. B. Lion, L. R. Oliveira and E. Eizirik. 2012. DNA Barcoding Meets Molecular Scatology: Short mtDNA Sequence for Standardized Species Assignment of Carnivore Noninvasive Samples. *Molecular Ecology Research.* 12: 18-35.
- Che, J., H. M. Chen, J. X. Yang, J. Q. Jin, K. Jiang, Z.Y. Yuan, R. W. Murphy and Y. P. Zhang. 2012. Universal COI primers for DNA Barcoding Amphibians. *Molecular Ecology Resources.* 12(2): 247-258.
- Chinnery, P. F. and G. Hudson. 2013. Mitochondrial Genetics. *British Medical Bulletin.* 106(1):135-159.
- Coelho, F. A. D. S., S. Gill, C. M. Tomlin, M. Papavassilou, S. D. Farley, J. A. Cook, S. A. Sonthagen, G. K. Sage, T. M. Heaton, S. L. Talbot and C. Lindqvist. 2023. Ancient Bears Provide Insights into Pleistocene Ice Age Refugia in Southeast Alaska. *Molecular Ecology.* 32:3641–3656.
- DeBoer, T. S., M. R. A. Naguit, M. V. Erdmann., M. C. A. A. Lagman, Ambariyanto, K. E. Carpenter, A. H. A. Toha and P. H. Barber. 2014a. Concordance between phylogeographic and biogeographic boundaries in the Coral Triangle: conservation implications based on comparative analyses of multiple giant clam species. *Bulletin of Marine Science.* 90(1): 277 300.

- DeBoer, T. S., M. R. A. Naguit, M. V. Erdmann, M. C. A. A. Lagman, Ambariyanto, K. E. Carpenter, A. H. A. Toha and P.H. Barber. 2014b. Concordant phylogenetic patterns inferred from mitochondrial and microsatellite DNA in the giant clam, *Tridacna crocea*. *Bulletin of Marine Science*. 90(1): 301329.
- Delisle, I. and C. Strobeck. 2005. A phylogeny of the Caniformia (order Carnivora) based on 12 complete protein-coding mitochondrial genes. *Molecular Phylogenetics and Evolution*. 37(1): 192–201.
- Deng, L. X. and C. He. 2014. The Complete Mitochondrial Genome of a Purebred Tibetan Mastiff (*C. lupus familiaris* breed Tibetan Mastiff) from Lijiang, China, and Comparison of Genome-Wide Sequence Variations. *Mitochondrial DNA*. ISSN 1940-1744, 1-2.
- DeSalle, R. and P. Goldstein. 2019. Riview and Interpretation of Trends in DNA Barcoding. *Front. Ecol. Evol.* 7:302.
- Desler, C., M. L. Marcker, K. K. Singh and L. J. Rasmussen. 2011. The Importance of Mitochondrial DNA in Aging and Cancer. *Journal of Aging Research*. 2011: 1–9.
- Drancourt, M., C. Bollet, A. Carlioz, R. Martelin, J. P. Gayral and D. Raoult. 2000. 16S ribosomal DNA sequence analysis of a large collection of environmental and clinical unidentifiable bacterial isolates. *Journal of Clinical Microbiology*. 38(10):3623–3630.
- Falush, D., M. Stephens and J. K. Pritchard. 2003. Inference of Population Structure Using Multilocus Genotype Data: Linked Loci and Correlated Allele Frequencies. *Genetics*. 154:1567-1587.
- Fitzgerald, C. S. and P. R. Krausman. 2002. Mammalian Species: *H. malayanus*. *American Society of Mammalogist*. 696:1-5.
- Fontanesi, F. 2015. Mitochondria: Structure and Role in Respiration. *Encyclopedia of Life Sciences*. In: eLS. John Wiley and Sons, Ltd: Chichester. 1-13.
- Fredriksson, G., R. Steinmetz, S. Wong and D. L. Garshelis (IUCN SSC Bear Specialist Group). 2008. *H. malayanus*. The IUCN Red List of Threatened Species 2008: e.T9760A13014055.
- Friedman, J. R. and J. Nunnari. 2014. Mitochondrial Form and Function. *Nature*. 505 (7483):335-343.

- Galtier, N., B. Nabholz., S. Glemin and G. D. D. Hurst. 2009. Mitochondrial DNA as a marker of molecular diversity: a reappraisal. *Molecular Ecology*. 18: 4541-4550.
- Gomez, L., C. R. Shepherd and J. Morgan. 2019. Revealing The online trade of Sun Bears in Indonesia. *TRAFFIC Bulletin*. 31(2).
- Guo, C., I. C. McDowell, M. Nodzenski, D. M. Scholtens, A. S. Allen, W. L. Lowe dan T. E. Reddy. 2017. Transversions have larger regulatory effects than transitions. *BMC Genomics*. 18(394): 1-9.
- Hall, T. A. 1999. BioEdit: A User-Friendly Biological Sequence Alignment Aditor and Analysis Program for Windows 95/98/NT. *Nucleic Acid Symposium Series*. 41: 95-98.
- Hebert, P. D. N., S. Ratnasingham and J. R. DeWaard. 2003a. Barcoding Animal Life: Cytochrome C Oxidase Subunit 1 Divergences among Closely Related Species. *Proceedings of the Royal Society B. Biological Sciences* 270: 96-99.
- Hebert, P. D. N., A. Cywinska, S. L. Ball and J. R. DeWaard. 2003b. Biological Identifications Through DNA Barcodes. *Proc. R. Soc. Lond. B.* 270 (1512):313-321.
- Hebert, P. D. N., E. H. Penton, J. M. Burns, D. H. Janzen and W. Halwachs. 2004. Ten Species In One: Dna Barcoding Reveals Cryptic Species In The Neotropical Skipper Butterfly *astraptes Fulgerator*. *Proc. Natl. Acad. Sci. U.S.A.* 101: 14812–14817.
- Hebert, P. D. N. and T. R. Gregory. 2005. The Promise of DNA Barcoding for Taxonomy. *Systematic Biology*. 54(5): 852-859.
- Hirata, D., T. Mano, A. V. Abramov, G. F. Baryshnikov, P. A. Kosintsev, A. A. Vorobiev, E. G. Raichev, H. Tsunoda, Y. Kaneko, K. Murata, D. Fukui and R. Masuda. 2013. Molecular Phylogeography of the Brown Bear (*U. arctos*) in Northeastern Asia Based on Analyses of Complete Mitochondrial DNA Sequences. *Molecular Biology and Evolution*. 30(7): 1644–1652.
- IUCN. 2017. *H. malayanus*. The IUCN Red List of Threatened [Species](https://www.iucnredlist.org/species/9760/123798233#assessment) 2017. Access on 14 September 2023.
- Kadariya, R., M. Shimozuru, J. E. Maldonado, M. A. M. Moustafa, M. Sashika and T. Tsubota. 2018. High genetic diversity and distinct ancient lineage of Asiatic black

bears revealed by non-invasive surveys in the Annapurna Conservation Area, Nepal. *PLoS ONE* 13(12).

Karp, A., G. I. Peter and S. I. David. 1998. *Molecular Tools for Screening Biodiversity*. Pub. Chapman and Hall, London. 112-113.

Kartavtsev, Y. P. H. and J. S. Lee. 2006. Analysis of Nucleotide Diversity at Genes Cyt-b and Co-1 on Population, Species, and Genera Levels. Applicability of DNA and allozyme data in the genetics of speciation. *Genetika* .42: 437–461.

Kartavtsev, Y.P.H. 2011. Divergence at Cyt-b and Co-1 mtDNA genes of different taxonomic level and genetics of speciation in animals. *Mitochondrial DNA*. 22(3): 55-56.

Khedkar, G. D., S. B. Abhayankar, D. Nalage, S. N. Ahmed and C. D. Khedkar. 2014. DNA barcode-based wildlife forensics for resolving the origin of claw samples using a novel primer cocktail. *Mitochondrial DNA*. ISSN: 1940-1744.

Ko, H. L., Y. T. Wang, T. S. Chiu, M. A. Lee, M. Y. Leu, K. Z. Chang, W. Y. Chen and K. T. Shao. 2013. Evaluating the Accuracy of Morphological Identification of Larval Fishes by Applying DNA Barcoding. *PLoS ONE*. 8: 1-7.

Kochzius, M., C. Siedel, A. Antoniou, S. K. Botla, D. Campo, A. Cariani, E. G. Vazquez, J. Hauschild, C. Hervet, S. Hjörleifsdottir, G. Hreggvidsson., K. Kappel, M. Landi, A. Magoulas, V. Marteinsson, M. Nolte, S. Planes, F. Tinti, C. Tauran, M.N. Venugopal, H. Weber and D. Blohm. 2010. Identifying Fishes through DNA Barcodes and Microarrays. *PLoS ONE* 5(9): e12620.

Krause, J., T. Unger, A. Nocon, A. S. Malaspinas, S. O. Kolokotronis, M. Stiller, L. Soibelzon, H. Spriggs, P. H. Dear, A. W. Briggs, S. C. E. Bray, S. J. O'Brien, G. Rabeder, P. Matheus, A. Cooper, M. Slatkin, S. Pääbo and M. Hofreiter. 2008. Mitochondrial Genomes Reveal an Explosive Radiation of Extinct and Extant Bears Near the Miocene-Pliocene Boundary. *BMC Evolutionary Biology*. 8(220): 1-12.

Kress, W. J. and D. L. Erickson. 2012. DNA Barcodes: Methods and Protocols. *Methods in Molecular Biology™ DNA Barcodes*. 858(6): 3-8.

Kress, W.J., C. G. Robledo, M. Uriarte and D. L. Erickson. 2015. DNA Barcodes for Ecology, Evolution, and Conservation. *Elsevier: Trends in Ecology dan Evolution*. 3(1): 25-35.

- Kress, W. J. 2017. Plant DNA barcodes: *Applications today and in the future*. *Journal of Systematics and Evolution*. 55 (4): 291 –307.
- Kumar, S. and S. Subramanian. 2001. Mutation rates in mammalian genomes. *Proceedings of the National Academy of Sciences*. 99(2): 803–808.
- Kunde, M. N., A. Barlow, A. Klittich, A. Yakupova, R. P. Patel, J. Fickel and D. W. Förster. 2023. First mitogenome phylogeny of the sun bear *H. malayanus* reveals a deep split between Indochinese and Sundaic lineages. *Ecology and Evolution*. 13, e9969.
- Ladoukakis, E. D. and E. Zouros. 2017. Evolution and inheritance of animal mitochondrial DNA: rules and exceptions. *J of Biol Res-Thessaloniki*. 24:2
- Lai, W. L., S. Ratnayeke, C. Austin, S. Rahman, Q. Ayub, N. A. M. Kulaimi, S. Kuppusamy and J. Chew. 2021. Complete Mitochondrial Genome of a Sun Bear from Malaysia and its position in the Phylogeny of Ursidae. *BioOne Complete*. 32(19): 1-10.
- Lan T, S. Gill, E. Bellemain, R. Bischof, M. A. Nawaz and C. Lindqvist. 2017. Evolutionary history of enigmatic bears in the Tibetan Plateau–Himalaya region and the identity of the yeti. *Proc. R. Soc. B* 284: 20171804.
- Lodish, H., S. L. Berk, P. Zipursky, D. Matsudaira, Baltimore and J. Darnell. 2000. *Molecular Cell Biology, 4th Edition*. W.H Freeman and Company. New York.
- Lodish, H., A. Berk, P. Matsuidara, C.A. Kaiser, M. Krieger, M.P. Scott, L. Zipursky and J. Darnell. 2003. *Molecular Cell Biology. 5th edition*. Newyork: WH Freeman.
- Lyons, D. M. and A. S. Lauring. 2017. Evidence for the selective basis of transition transversion substitution bias in two RNA viruses. *Molecular Biology and Evolution*. 34(12): 3205-3215.
- Marko, P. B., S. C. Lee, A. M. Rice, J. M. Gramling, T. M. Fitzhenry, J. S. McAlister, G. R. Horn and A. L. Moran. 2004. Mislabelling of a depleted ref fish. *Nature*. 430:309–310.
- Maryanto, I., M. Datun., A.S. Achmadi, S. Wiantoro, E. Sulistyadi, M. Yoneda, A. Suyanto and J. Sugardjito. 2020. *Checklist of the Mammals of Indonesia Scientific, English, Indonesia Name and Distribution Area Table in Indonesia Including CITES, IUCN and Indonesian Category for Conservation*. Bogor. LIPI.

Mclelan, B. 1994. A Review of Bear Evolution. *Int. Conf. Bear Res. and Manage.* 9(1):85-96

Medway, L. 1969. *The Wild Mammals of Malaya and offshore islands including Singapore*. Oxford University Press. London Randi E. Mitochondrial DNA. In:

Meijaard, E. 2004. Craniometric Differences Among Malayan Sun Bears (*U. malayanus*); Evolutionary and Taxonomic Implications. *The Raffles Bulletin of Zoology*. 52(2): 665-672.

Miller, W., S.C. Schuster, A.J. Welch, A. Ratan, O.C. Bedoya-Reina, F. Zhao, H.L. Kim, R.C. Burhans, D.I. Drautz, N.E. Wittekindt, L.P. Tomsho, E. Ibarra-Laclette, L. Herrera-Estrella, E. Peacock, S. Farley, G.K. Sage, K. Rode, M. Obbard, R. Montiel, L. Bachmann, O. Ingólfsson, J. Aars, T. Mailund, O. Wiig, S. L. Talbot and C. Lindqvist. 2012. Polar and brown bear genomes reveal ancient admixture and demographic footprints of past climate change. *Proc Natl Acad Sci USA*. 4;109(36): E2382-90.

Puckett, E. E., P.D. Etter, E.A. Johnson and L.S. Eggert. 2015. Phylogeographic Analyses of American Black Bears (*U. americanus*) Suggest Four Glacial Refugia and Complex Patterns of Postglacial Admixture. *Molecular Biology and Evolution*. 32(9): 2338–2350.

Ratnasingham, S. and Hebert, P.D.N. 2007. BOLD: The Barcode of Life Data System (<http://www.barcodinglife.org>). *Molecular Ecology Notes*. 7: 355-364.

Richter, C., J. W. Park and B. N. Ames. 1998. Normal oxidative damage to mitochondrial and nuclear DNA is extensive. *Proc. Nati. Acad. Sci. USA*. 85: 6465-6467

Rozas, J., J. C. S. DelBarrio, X. Messeguer and R. Rozas. 2003. DnaSP, DNAb Polymorphism Analyses by the Coalescent and Other Methods. *Bioinformatics*. 19:2496-2497.

Saccone, C., C. de Giorgi, C. Gissi, G. Pesole and A. Reyes. 1999. Evolutionary Genomics in metazoa: in Metazoa: The Mitochondrial DNA as a Model System. *Gene*. 238:195- 209.

Saleky, D., I. Setyobudiandi, H. A. Toha., M. Takdir and H. H. Madduppa. 2016. Length-weight relationship and population genetic of two marine gastropods species (Turbinidae: Turbo sparverius and Turbo bruneus) in the bird head's seashore Papua, Indonesia. *Biodiversitas*. 17(1): 208-217.

- Sambrook, J. and D. W. Russell. 2001. *Molecular Cloning, A laboratory Manual. 3nd edition.* Cold Spring Harbor Laboratory Press. New York.
- Schaffer, S.W. and M.S. Suleiman. 2010. *Mitochondria:the dynamic organelle.* (Vol. 2). Springer Science and Business Media. New York.
- Scotson, L., G. Fredriksson, D. Augeri, C. Cheah, D. Ngoprasert and W. Wai-Ming. 2017. *H. malayanus* (errata version published in 2018). *The IUCN Red List Threatened Species 2017:* e.T9760A123798233.
- Sethy, J. and N. P. S. Chauhan. 2018. Dietary Preference of Malayan Sun Bear *H. malayanus* in Nandapha Tiger Reserve, Arunachal Pradesh, India. *Wildlife Biology* 2018(1): 1-10.
- Shahzadi, I., S. Janjua, F. I. Abbas and G. J. Galbreath. 2014. A Universal Primer Set to Amplify the Cytochrome c Oxidase Subunit 1 Gene in Bear. *Ursus.* 25(1): 73-77.
- Shen, Y. Y., X. Chen and R. W. Murphy. 2013. Assessing DNA Barcoding as a Tool for Species Identification and Data Quality Control. *Plos One* 8(2): e57125.
- Simon, C. 1991. Molecular Systematics at the Species Boundary: Exploiting Conserved and Variable Regions of the Mitochondrial Genome of Animals via Direct Sequencing from Amplified DNA. *Molecular Techniques in Taxonomy.* 33–71.
- Singh, R. K., S. K. Saini, G. Prakasam, P. Kalairasan and R. N. K. Bamezai. 2019. Role of ectopically expressed mtDNA encoded cytochrome c oxidase subunit I (MT-COI) in tumorigenesis. *Mitochondrion.* 49: 56-65. ISSN 1567-7249.
- Susanti, R., R. S. Iswari, F. Fibriana and Indriawati. 2018. The Duck Cytochrome oxidase 1 (COI) gene: Sequence and Pattern Analysis for Potential Barcoding Tool. *Biodiversitas.* 19 (3): 997-1003.
- Tamura, K., G. Stetcher, D. Peterson, A. Filipski and S. Kumar. 2013. Mega 6: Molecular Evolutionary Genetics Analysis Version 6.0. *Mol. Biol. Evol.* 30 (12):2725-2729.
- Tanabe, A. S. and H. Toju. 2013. Two New Computational Methods for Universal DNA barcoding: A Benchmark Using Barcode Sequences of Bacteria, Archaea, Animals, Fungi, and Land Plants. *Plos One.* 8(10):e76910.
- Tautz, D., P. Arctander, A. Minelli, R. H. Thomas and A. P. Vogler. 2003. A Plea for DNA Taxonomy. *Trends Ecol* 18: 70-74.

- Tenriulo, A., E. Suryati., A. Parenrengi and Rosmiat. 2001. Ekstraksi rumput laut Kappaphycus alvarezii dengan metode fenol kloroform. *Marina Chimica Acta* 2(2): 6-10.
- Tobe, S. S., A. Kitchener and A. Linacre. 2009. Cytochrome B or Cytochrome C Oxidase Subunit I for Mammalian Species Identification—An Answer to the Debate. *Forensic Science International: Genetics Supplement* 2: 306–307.
- Trivedi, S., A. A. Aloufi, A. A. Ansari and S. K. Ghosh. 2016. Role of DNA Barcoding in Marine Biodiversity Assessment and Conservation: An update. Saudi. *Journal of Biological Sciences* 23: 161 –171.
- Valdez-Moreno, M., C. Q. Lizama, R. G. Lozano and M. C. G. Rivas. 2012. Monitoring an Alien Invasion: DNA Barcoding and the Identification of Lionfish and Their Prey on Coral Reefs of the Mexican Caribbean. *Plos One* 7(6): e36636.
- Ward, R. D., T. S. Zemlak, B. H. Innes, P. R. Last and P. D. N. Hebert. 2005. DNA Barcoding Australia's Fish Species. *Phil. Trans. R. Soc. B.* 360:1847–1857.
- Waugh, J. 2007. DNA Barcoding in Animal Species: Progress, Potential and Pitfalls. *BioEssays* 29: 188-197.
- Woodruff, D. S. and L. M. Turner. 2009. The Indochinese– Sundaic zoogeographic transition: A description and analysis of terrestrial mammal species distributions. *Journal of Biogeography*. 36: 803-821.
- Wolstenholme, D. R. 1992. Animal mitochondrial DNA: structure and evolution. *Int Rev Cytol.* 141:173-216.
- Wong, S. T., C. Servheen and L. Ambu. 2002. Food habits of malayan sun bears in lowland forest of borneo. *Ursus.* 13: 127-136.
- Wong, S.T., C. Servheen and L. Ambu. 2004. Home Range, Movement and Activity Patterns, and Bedding Sites of Malayan Sun Bears *H. malayanus* in The Rainforest of Borneo. *Biological Conservation* 119: 169-181.
- Wu J., N. Kohno, S. Mano, Y. Fukumoto, H. Tanabe and M. Hasegawa. 2015. Phylogeographic and Demographic Analysis of the Asian Black Bear (*U. thibetanus*) Based on Mitochondrial DNA. *PLoS ONE* 10(9):e0136398
- Yu L., Y. W. Li, O. A. Ryder and Y. P. Zhang. 2007. Analysis of complete mitochondrial genome sequences increases phylogenetic resolution of bears (Ursidae) a

mammalian family that experienced rapid speciation. *BMC Evolutionary Biology*. 7 (198): 1–11.

