

## BIBLIOGRAPHY

- Abol-Munafi, A. B., Ambak, M. A., Ismail, P., & MinhTam, B. (2007). Molecular Data from the Cytochrome b for the Phylogeny of Channidae (Channa sp.) in Malaysia. *Biotechnology* , VI (1), 22-27
- Adams, M., Kelley, J., Gocayne, J., Dubnick, M., Polymeropoulos, M., Xiao, H., et al. (1991). Complementary DNA sequencing: expressed sequence tags and human genome project. *Science* , 252, 1651– 1656.
- Ahmadian, A., Gharizadeh, B., Gustafsson, A. C., Sterky, F., Nyrén, P., Uhlén, M., et al. (2000). Single-Nucleotide Polymorphism Analysis by Pyrosequencing. *Analytical Biochemistry* , 280 (1), 103-110.
- Ali, A. B. (1999). Aspects of the reproductive biology of female snakehead (Channa striata Bloch) obtained from irrigated rice agroecosystem, Malaysia. *Hydrobiologia* , 4111, 71–77.
- Ali, B. A., Ahmed, M. M., & El-Zaeem, S. Y. (2004). Technical note: application of RAPD markers in fish. Part II: among and within families; Cichlidae (Freshwater), Mugilidae (Catadromous), Sparidae and Serranidae (Marine). *International Journal of Biotechnology* , 6 (4), 393 - 401.
- Altshuler, D., Pollara, V. J., Cowles, C. R., Van Etten, W. J., Baldwin, J., Linton, L., et al. (2000). An SNP map of the human genome generated by reduced representation shotgun sequencing. *Nature* , 407, 513-516.
- Ambali, A. (1996). Relationship between domestication and genetic diversity of Oreochromis species in Malawi : Oreochromis shiranus shiranus (Boulenger) and

*Oreochromis shiranus chilwae* (Trewavas). *Ph. D. Thesis, Dalhousie University* .  
Halifax, N.S., Canada.

Ambok Bolong, A.-M., Mohd Azmi, A., Ismail, P., & Bui, M. (2007). Molecular Data from the Cytochrome b for the Phylogeny of. *Biotechnology* , 6 (1), 22-27.

Aparicio, S., Chapman, J., Stupka, E., Putnam, N., Chia, J., Dehal, P., et al. (2002). Whole-Genome Shotgun Assembly and Analysis of the Genome of *Fugu rubripes*. *Science* , 297, 1301-1310.

Applied Biosystems. (2004). *Microsatellite Analysis on the 3130 Series Systems*. Retrieved October 25, 2009, from Applied Biosystems: [http://www3.appliedbiosystems.com/cms/groups/mcb\\_marketing/documents/generaldocuments/cms\\_040581.pdf](http://www3.appliedbiosystems.com/cms/groups/mcb_marketing/documents/generaldocuments/cms_040581.pdf)

Avise, J. C. (1994). *Molecular markers, natural history and evolution*. London: Chapman & Hall.

Babjee, A. M. (2010). Challenges in Biodiversity Conservation in Malaysia. *Eminent Person's Lecture* (pp. 1-27). Kuala Lumpur: Academy of Sciences Malaysia.

Bachtrog, D., Agis, M., Imhof, M., & Schlotterer, C. (2000). Microsatellite Variability Differs Between Dinucleotide Repeat Motifs—Evidence from *Drosophila melanogaster*. *Mol. Biol. Evol.* , 17 (9), 1277–1285.

Baie, S. H., & Sheikh, K. (2000). The wound healing properties of *Channa striatus*-cetrinide cream — tensile strength measurement. *Journal of Ethnopharmacology* , 71, 93–100.

- Baie, S. H., & Sheikh, K. (2000). The wound healing properties of Channa striatus-cetrimide cream-wound contraction and glycosaminoglycan measurement. *Journal of Ethnopharmacology* , 73, 15-30.
- Baker, N. (2002). *Tasik Bera- Malaysia's first protected freshwater wetland*. Retrieved February 27, 2010, from Ecology Asia: <http://www.ecologyasia.com/html-loc/tasik-bera.htm>
- Balloux, F., & Lugon-Moulin, N. (2002). The estimation of population differentiation with microsatellite markers. *Mol. Ecol.* , 11, 155– 165.
- Banerjee, S. K., Misra, K. K., Banerjee, S., & Ray-Chaudhuri, S. P. (1988). Chromosome numbers, genome sizes, cell volumes and evolution of snake-head fish (family Channidae). *J. Fish Biol.* , 33, 781-789.
- Bardakci, F. (2001). Random Amplified Polymorphic DNA (RAPD) Markers. *Turk J Biol* , 25, 185-196.
- Bardakci, F., & Skibinski, D. O. (1994). Application of the RAPD technique in tilapia fish: species and subspecies identification. *Heredity* , 73, 117-123.
- Bassuny, W. M., Ihara, K., Sasaki, Y., Kuromaru, R., Kohno, H., Matsuura, N., et al. (2003). A functional polymorphism in the promoter/enhancer region of the FOXP3/Scurfin gene associated with type 1 diabetes. *Immunogenetics* , 55, 149-156.
- Bentzen, P., Harris, A. S., & Wright, J. M. (1991). Cloning of hypervariable minisatellite and simple sequence microsatellite repeats for DNA fingerprinting of important aquacultural species of salmonids and tilapia. In Burke, T., Dolf, G., Jeffreys, A.J. and Wolf, R., eds. DNA. In T. Burke, G. Dolf, A. Jeffreys, & R. Wolf, *DNA Fingerprinting Approaches and Application* (pp. 243-262). Basel: Birkhauser Verlag.

Bentzen, P., Taggart, C. T., Ruzzante, D. E., & Cook, D. (1996). Microsatellite polymorphism and the population structure of Atlantic cod (*Gadus morhua*) in the northwest Atlantic. *Canadian Journal of Fisheries and Aquatic Sciences* , 53, 2706-2721.

Bernamea . (2009, May 15). EU and M'sia to cooperate on curbing illegal fishing. *Bernamea* .

Bernatchez, L., Guyomard, R., & Bonhomme, F. (1992). DNA sequence variation of the mitochondrial control region among geographically and morphologically remote European brown trout *Salmo trutta* populations. *Molecular Ecology* , 1, 161-173.

Berra, T. M. (2007). *Channidae-snakeheads*. Chicago: University of Chicago Press.

Bhatt, V. S. (1970). Studies on the Growth of *Ophicephalus striatus* Bloch. *Hydrobiologia* , 36 (1), 165-177.

Bhatramakki, D., Dolan, M., Hanafey, M., Wineland, R., Vaske, D., Register, J. C., et al. (2002). Insertion-deletion polymorphisms in 3' regions of maize genes occur frequently and can be used as highly informative genetic markers. *Plant Molecular Biology* , 48, 539-547.

Bijlsma-Neeles, E., & Van Delden, W. (1974). Intra- and interpopulation selection concerning the alcohol dehydrogenase locus in *Drosophila melanogaster*. *Nature* , 247, 369-371.

Bio. Dept. UC Santa Cruz. (2005, February 22). *Winter 2005 Lecture: Linkage disequilibrium and recombination*. Retrieved February 20, 2010, from Biological Sciences at UC Santa Cruz: Undergraduate program: [http://bio.classes.ucsc.edu/bio107/Class pdfs/W05\\_lecture15.pdf](http://bio.classes.ucsc.edu/bio107/Class%20pdfs/W05_lecture15.pdf)

- Blattner, F., Plunkett, G. I., Bloch, C., Perna, N., Burland, V., Riley, M., et al. (1997). The complete genome sequence of *Escherichia coli* K-12. *Science* , 277, 1453-1474.
- Bloch, M. (1793). *Ophicephalus striatus*. In *Naturgeschichte Ausländischer Fische* (Vol. VI, pp. 141-142).
- Botstein, D., White, R. L., Skolnick, M., & Davis, R. W. (1980). Construction of a Genetic Linkage Map in Man Using Restriction Fragment Length Polymorphisms. *Am. J. Hum. Genet.* , 32, 314-331.
- Brookfield, J. F. (1996). A simple new method for estimating null allele frequency from heterozygote deficiency. *Molecular Ecology* , 5, 453-455.
- Brown, W. (1983). Evolution of animal mitochondrial DNA. In M. Nei, & R. Koehn, *Evolution of Genes and Proteins* (pp. 62-88). Sunderland: Sinauer Associates, Inc.
- Brown, W., George, M., & Wilson, A. (1979). Rapid evolution of animal mitochondrial DNA. *Proc Natl Acad Sci USA* , 76, 1967-1971.
- Brummer, E. C., Graef, G. L., Orf, J., Wilcox, J. R., & Shoemaker, R. C. (1997). Mapping QTL for Seed Protein and Oil Content in Eight Soybean Populations. *Crop Sci.* , 37, :370-378.
- Cagauan, A. G. (2007). Exotic aquatic species introduction in the philippines for aquaculture- A threat to biodiversity of a boon to the economy? *Journal of environmental science and management* , 10 (1), 48-62.
- Callen, D., Thompson, A., Shen, Y., Phillips, H., Richards, R., Mulley, J., et al. (1993). Incidence and origin of 'null' alleles in the (AC)<sub>n</sub> microsatellite markers. *Am. J. Hum. Genet.* , 52, 922-927.

- Carter, R., Mair, G., Skibinski, D., Parkin, D., & Beardmore, J. (1991). The application of DNA fingerprinting in the analysis of gynogenesis of tilapia. *Aquaculture* , 95, 41-52.
- Castro, J. A., Picornell, A., & Ramon, M. (1998). Mitochondrial DNA: a tool for populational genetics studies. *Internatl. Microbiol.* , 1, 327–332.
- Chakraborty, R., De Andrade, M., Daiger, S., & Budowle, B. (1992). Apparent heterozygote deficiencies observed in DNA typing data and their implications in forensic applications. *Annals of Human Genetics* , 56, 45-47.
- Chakraborty, R., Kimmel, M., Stivers, D. N., Davison, L. J., & Deka, R. (1997). Relative mutation rates at di-, tri-, and tetranucleotide microsatellite loci. *Anthropology* , 94, 1041–1046.
- Chandra, S., & Banerjee, T. K. (2004). Histopathological analysis of the respiratory organs of *Channa striata* subjected to air exposure. *Veterinarski Arhiv* , 74 (1), 37-52.
- Chapuis, M.-P., & Estoup, A. (2007). Microsatellite Null Alleles and Estimation of Population Differentiation. *Molecular Biology and Evolution* , 24 (3), 621-631.
- Clontech. (2008, October). *Effective Hot Start PCR*. Retrieved February 17, 2010, from Clontech Laboratories, Inc: [http://www.clontech.com/images/ctq/OCT08UPD/CR8X2832\\_CTQOct08\\_HotStartPCR\\_US.pdf](http://www.clontech.com/images/ctq/OCT08UPD/CR8X2832_CTQOct08_HotStartPCR_US.pdf)
- Collins, F. S., Brooks, L. D., & Chakravarti, A. (1998). A DNA Polymorphism Discovery Resource for Research on Human Genetic Variation. *Genome Res.* , 8, 1229-1231.
- Collins, F. S., Morgan, M., & Patrinos, A. (2003). The Human Genome Project: Lessons from Large-Scale Biology. *Science* , 300, 286-290.

- Cong, N. V., Phuong, N. T., & Bayley, M. (2009). Effects of repeated exposure of diazinon on cholinesterase activity and growth in snakehead fish (*Channa striata*). *Ecotoxicology and Environmental Safety* , 72, 699–703.
- Corti, P., Shafer, A. B., Coltman, D. W., & Festa-Bianchet, M. (2010). Past bottlenecks and current population fragmentation of endangered huemul deer (*Hippocamelus bisulcus*): implications for preservation of genetic diversity. *Conserv Genet* , in press.
- Coulson, T. N., Pemberton, J. M., Albon, S. D., Beaumont, M., Marshall, T. C., Slate, J., et al. (1998). Microsatellites reveal heterosis in red deer. *Proc. R. Soc. Lond. B* , 265, 489-495.
- Courtenay, W. J., Williams, J., Britz, R., Yamanoto, M., & Loiselle, P. (2004). Identity of introduced snakeheads (Pisces, Channidae) in Hawai'i and Madagascar, with comments on ecological concerns. *Bishop Mus. Occ. Pap* , 77, 1-13.
- Courtenay, W., & Williams, J. (2004). *Channa striata* (Bloch, 1793). In W. Courtenay, & J. Williams, *Snakeheads (Pisces, Channidae): a biological synopsis and risk assessment* (pp. 115-121). U.S. Dept. of the Interior, U.S. Geological Survey.
- Coward, P., Nagai, K., Chen, D., Thomas, H. D., Nagamine, C. M., & Lau, Y.-F. C. (1994). Polymorphism of a CAG trinucleotide repeat within Sry correlates with B6.Y(Dom.) sex reversal. *Nature Genetics* , 6, 245 - 250.
- Dahm, R., & Geisler, R. (2006). Learning from Small Fry: The Zebrafish as a Genetic Model Organism for Aquaculture Fish Species. *Marine Biotechnology* , 8, 329–345.
- Dakin, E. E., & Avise, J. C. (2004). Microsatellite null alleles in parentage analysis. *Heredity* , 93, 504–509.

- Dasgupta, M. (2000). Adaptation of the alimentary tract to feeding habits in four species of fish of the genus *Channa*. *Indian Journal of Fisheries* , 47 (3), 265-269.
- Davey, G. C., Caplice, N. C., Martin, S. H., & Powell, R. (2001). A survey of genes in the Atlantic salmon (*Salmo salar*) as identified by expressed sequence tags. *Gene* , 263, 121-130.
- Dekkers, J. (2004). Commercial application of marker- and gene-assisted selection in livestock: Strategies and lessons. *J. Anim. Sci.* , 82, 313-328.
- Denaro, M., Blanc, H., Johnson, M. J., Chen, K. H., WILMSEN, E., CAVALLI SFORZA, L., et al. (1981). Ethnic variation in Hpa I endonuclease cleavage patterns of human mitochondrial DNA. *Proc. NatL Acad. Sci. USA* , 78 (9), 5768-5772.
- Diab, A. M., Williams, T., Sabine, V. S., Chipman, J. K., & George, S. (2008). The GENIPOL European flounder *Platichthys flesus* L. toxicogenomics microarray: application for investigation of the response to furunculosis vaccination. *Journal of Fish Biology* , 72 (9), 2154 - 2169.
- Dobzhansky, T., & Queal, M. (1937). Genetics of natural populations. I. Chromosome variation in populations of *Drosophila pseudoobscura* inhabiting isolated mountain ranges. *Genetics* , 23, 239.
- Dodson, J. J., Colombani, F., & Ng, P. K. (1995). Phylogeographic structure in mitochondrial DNA of a Southeast Asian freshwater fish, *Hemibagrus nemurus* (Siluroidei: Bagridae) and Pleistocene sea-level changes on the Sunda shelf. *Mol. Ecol* , 4, 331-346.
- Donis-Keller, H., Green, P., Helmsa, C., Cartinhour, S., Weiffenbach, B., Stephens, K., et al. (1987). A genetic linkage map of the human genome. *Cell* , 51, 319-337.



- Donsakul, T., & Magtoon, W. (1991). Chromosome study on five species of channid fishes (Channa, family Channidae), from Thailand. *Proceeding of the 29th Kasetsart University Annual Conference* (pp. 561-574). Bangkok: Kasetsart University.
- Douglas, S. E., Gallant, J. W., Bullerwell, C. E., Wolff, C., Munholland, J., & Reith, M. E. (1999). Winter Flounder Expressed Sequence Tags: Establishment of an EST Database and Identification of Novel Fish Genes. *Mar. Biotechnol.* , 1, 458–464.
- Durand, P., Michalakis, Y., Cestier, S., Oury, B., Leclerc, M. C., Tibayrenc, M., Et Al. (2003). Significant linkage disequilibrium and high genetic diversity in a population of plasmodium falciparum from an area (republic of the congo) highly endemic for malaria. *Am. J. Trop. Med. Hyg* , 68 (3), 345–349.
- Dweikat, I., Mackenzie, S., Levy, M., & Ohm, H. (1993). Pedigree assessment using RAPD-DGGE in cereal crop species. *TAG Theoretical and Applied Genetics* , 85 (5), 497-505.
- Ellis, R. P., McNicol, J. W., Baird, E., Booth, A., Lawrence, P., Thomas, B., et al. (1997). The use of AFLPs to examine genetic relatedness in barley. *Molecular Breeding* , 3 (5), 359-369.
- Estoup, A., Presa, P., Krieg, F., Vaiman, D., & Guyomard, R. (1993). (CT)<sub>n</sub> and (GT)<sub>n</sub> microsatellites: a new class of genetic markers for Salmo trutta L. (brown trout). *Heredity* , 71, 488-496.
- Estoup, A., Tailliez, C., Cornuet, J.-M., & Solignac, M. (1995). Size homoplasy and mutational processes of interrupted microsatellites in two bee species, Apis mellifera and Bombus terrestris processes of interrupted microsatellites in two bee species, Apis mellifera and Bombus terrestris (Apidae). *Mol. Biol. Evol.* , 12, 1074 -1084.

- Excoffier, L., Smouse, P., & Quattro, J. (1992). Analysis of molecular variance inferred from metric distances among DNA haplotypes: application to human mitochondrial DNA restriction data. *Genetics* , 131 (2), 479–491.
- Felsenstein, J. (1989). PHYLIP—Phylogeny Inference Package (version 3.2). *Cladistics* , 5, 164–166.
- Ferguson, A. (1994). Molecular genetics in fisheries: current and future perspectives. *Reviews in Fish Biology and Fisheries* , 4, 379-383.
- Ferguson, A., Taggart, J., Prodohl, P., McMeel, O., Thompson, C., Stone, C., et al. (1995). The application of molecular markers to the study and conservation of fish populations, with special reference to *Salmo*. *J. Fish Biol.* , 47, 103-126.
- Fisher, P. J., Gardner, R. C., & Richardson, T. E. (1996). Single locus microsatellites isolated using 5' anchored PCR. *Nucleic Acids Research* , 24 (21), 4369–4371.
- Fos, M., Dominguez, M., Latorre, A., & Moya, A. (1990). Mitochondrial DNA evolution in experimental populations of *Drosophila subobscura*. *Proc Natl Acad Sci* , 87, 4198–4201.
- Frankham, R., Ballou, J. D., & Briscoe, D. A. (2002). *Introduction to conservation genetics*. Cambridge: Cambridge university press.
- Gagneux, P., Boesch, C., & Woodruff, D. (1997). Microsatellite scoring errors associated with noninvasive genotyping based on nuclear DNA amplified from shed hair. *Mol Ecol.* , 6 (9), 861-868.
- Galvin, P., McGregor, D., & Cross, T. (1995). A single locus PCR amplified minisatellite region as a hypervariable genetic marker in gadoid species. *Aquaculture* , 137, 31-40.

- Galvin, P., Sadusky, T., McGregor, D., & Cross, T. (1995). Population genetics of Atlantic cod using amplified single locus minisatellite VNTR analysis. *J. Fish Biol.* , 47, 200-208.
- Galvin, P., Taggart, J., Ferguson, A., O'Farrell, M., & Cross, T. (1996). Population genetics of Atlantic salmon (*Salmo salar*) in the River Shannon system in Ireland: an appraisal using single locus minisatellite (VNTR) probes. *Can. J. Fish. Aquat. Sci.* , 53 (9), 1933–1942.
- Gam, L.-H., Leow, C.-Y., & Baie, S. (2006). Proteomic Analysis of Snakehead Fish (*Channa striata*) Muscle Tissue. *Malaysian Journal of Biochemistry and Molecular Biology* , 14, 25-32.
- Gibbs, R., Weinstock, G., Metzker, M., Muzny, D., Sodergren, E., Scherer, S., et al. (2004). Genome sequence of the Brown Norway rat yields insights into mammalian evolution. *Nature* , 428, 493-521.
- Glasgow Jr., H. B., & Burkholder, J. M. (2000). Water Quality Trends and Management Implications from a Five-Year Study of a Eutrophic Estuary. *Ecological Applications* , 10 (4), 1024-1046.
- Glaubitz, J. (2004). CONVERT: A user-friendly program to reformat diploid genotypic data for commonly used population genetic software packages. *Molecular Ecology Notes* , 4, 309-310.
- Goff, D., Galvin, K., Katz, H., Westerfield, M., Lander, E., & Tabin, C. (1992). Identification of polymorphic simple sequence repeats in the genome of the zebrafish. *Genomics* , 14 (1), 200-202.

- Goldstein, D. B., & Clark, A. G. (1995). Microsatellite variation in North American populations. *Nucleic Acids Research*, 23 (19), 3882-3886.
- Greenwood, P. H., Rosen, D. E., Weitzman, S. H., & Myers, G. S. (1966). Phyletic studies of teleostean fishes, with a provisional classification of living forms. *Bulletin of the American Museum of Natural History*, 131, 436-444.
- Gregory, T. (2005). *Animal Genome Size Database*. Retrieved January 9, 2010, from Genome Size: <http://www.genomesize.com>
- Grey, M. (1989). Origin and Evolution of Mitochondrial DNA. *Annual Review of Cell Biology*, 5, 25-50.
- Griffin, T. J., & Smith, L. M. (2000). Single-nucleotide polymorphism analysis by MALDI-TOF mass spectrometry. *Trends in Biotechnology*, 18 (2), 77-84 .
- Grzimek, B. (2003). Fishes I. In M. Hutchins, D. A. Thoney, P. V. Loiselle, & N. Schlager (Eds.), *Grzimek's animal life encyclopedia* (Vol. IV, pp. 435-447). Farmington Hills, MI: Gale Group.
- Gusella, J., Wexler, N., Conneally, P., Naylor, S., Anderson, M., Tanzi, R., et al. (1983). A polymorphic DNA marker genetically linked to Huntington's disease. *Nature*, 306, 234-238.
- Gwakisa, P. S., Kemp, S. J., & Teale, A. J. (1994). Characterization of Zebu cattle breeds in Tanzania using random amplified polymorphic DNA markers. *Animal Genetics*, 25 (2), 89-94.
- Hadrys, H., Balick, M., & Schierwater, B. (1992). Applications of Random Amplified Polymorphic DNA (RAPD) in molecular ecology. *Molecular Ecology*, 55-63.

- Hamilton, M. B. (2009). *Population Genetics*. Chichester, UK: Blackwell publishing.
- Hancock, J. M. (1999). Microsatellites and other simple sequences: genomic context and mutational mechanisms. In D. B. Goldstein, & C. Schlotterer (Eds.), *Microsatellites: Evolution and Applications* (pp. 1-9). New York: Oxford university press.
- Hansen, M. M., Kenchington, E., & Nielsen, E. E. (2001). Assigning individual fish to populations using microsatellite DNA markers. *Fish and Fisheries* , 2 (2), 93 - 112.
- Hardy, H. (1908). Mendelian proportions in a mixed population. *Science* , 28, 49-50.
- Harris, A., Bieger, S., & Doyle, R. W. (1991). Fingerprinting of tilapia, *Oreochromis niloticus*, and its application to aquaculture genetics. *Aquaculture* , 92, 157-163.
- Harris, H. (1966). Enzyme Polymorphisms in Man. *Proceedings of the Royal Society of London. Series B, Biological Sciences* , 164 (995), 298-310.
- Hartl, D. L. (1980). *Principles of population genetics*. Sunderland, Massachusetts: Sinauer Associates, Inc.
- Hashim, R. (1994). The effect of mix feeding schedules of varying dietary protein content on the growth performance of *Channa striata* fry. *Asian Fisheries Science* , 7, 149-155.
- Hauser, L., & Seeb, J. E. (2008). Advances in molecular technology and their impact on fisheries genetics. *Fish and Fisheries* , 9, 473-486.
- Hayes, B., Laerdahl, J. K., Lien, S., Moen, T., Berg, P., Hindar, K., et al. (2007). An extensive resource of single nucleotide polymorphism markers associated with Atlantic salmon (*Salmo salar*) expressed sequences. *Aquaculture* , 265, 82-90 .

- He, C., Chen, L., Simmons, M., Li, P., Kim, S., & Liu, Z. (2003). Putative SNP discovery in interspecific hybrids of catfish by comparative EST analysis. *Anim Genet.* , 34 (6), 445-448.
- Hedges, S. B., & Kumar, S. (2002). Vertebrate Genomes Compared. *Science* , 297, 1283-1285.
- Herbinger, C., Doyle, R., Taggart, C., Lochmann, S., Brooker, A., Wright, J., et al. (1997). Family relationships and effective population size in a natural cohort of cod larvae. *Can. J. Fish. Aquat. Sci.* , 54, 11-18.
- Herborg, L.-M., Mandrak, N. E., Cudmore, B. C., & MacIsaac, H. J. (2007). Comparative distribution and invasion risk of snakehead (Channidae) and Asian carp (Cyprinidae) species in North America. *Canadian Journal of Fisheries and Aquatic Sciences* , 64 (12), 1723-1735.
- Hilton, R. (2002, August). *The Northern Snakehead: An Invasive Fish Species*. Retrieved January 30, 2010, from CSA Illumina: <http://www.csa.com/discoveryguides/snakehead/overview.php#n4>
- Hirono, I., & Aoki, T. (1997). Expressed sequence tags of medaka (*Oryzias latipes*) liver mRNA. *Mol Mar Biol Biotechnol.* , 6 (4), 345-350.
- Hofmann, S., Jaksch, M., Bezold, R., Mertens, S., Aholt, S., Paprotta, A., et al. (1997). Population genetics and disease susceptibility: characterization of central European haplogroups by mtDNA gene mutations, correlation with D loop variants and association with disease. *Human Molecular Genetics* , 6 (11), 1835–1846.
- Hopkinson, D. A., Spencer, N., & Harris, H. (1963). Red cell acid phosphatase variants: a new human polymorphism. *Nature* , 199, 969 - 971.

Hudson, R. R., Slatkin, M., & Maddison, W. P. (1992). Estimation of levels of gene flow from DNA sequence data. *Genetics* , 132, 583-589.

Hummel, S. (2003). DNA markers. In *Ancient DNA typing: methods, strategies, and applications* (pp. 19-56). New York: Springer.

Huslin, A. (2002, August 18). Biologists on Mission to Kill-Team Moves to Rid Crofton Pond of Predatory Snakehead. *Washington Post* , p. C03.

Inoue, S., Nam, B., Hirono, I., & Aoki, T. (1997). A survey of expressed genes in Japanese flounder (*Paralichthys olivaceus*) liver and spleen. *Mol Mar Biol Biotechnol.* , 6 (4), 376-380.

International Chicken Genome Sequencing Consortium. (2004). Sequence and comparative analysis of the chicken genome provide unique perspectives on vertebrate evolution. *Nature* , 432 (7018), 695-716.

J. Craig Venter Institute. (2004). *Genetics and Genomics Timeline: 1986-1990, Launching the effort to sequence the human genome*. Retrieved January 6, 2010, from Genome News Network: [http://www.genomenewsnetwork.org/resources/timeline/1986\\_1990\\_sequence\\_human.php](http://www.genomenewsnetwork.org/resources/timeline/1986_1990_sequence_human.php)

Jais, A. M. (2007). Pharmacognosy and pharmacology of Haruan (*Channa striatus*), a medicinal fish with wound healing properties. *Boletín Latinoamericano y del Caribe de Plantas Medicinales y Aromáticas* , VI (3), 52-60.

Jamaludin, F. (2002, July 26). Snakehead monster fish to Yanks but "healer" to Asians. *The Star Publication* .

- Jarne, P., & Lagoda, P. J. (1996). Microsatellites, from molecules to populations and back. *Trends in Ecology & Evolution* , X (10), 424-429.
- Jeffreys, A. J., Royle, N. J., Wilson, V., & Wong, Z. (1988). Spontaneous mutation rates to new length alleles at tandem-repetitive hypervariable loci in human DNA. *Nature* , 332, 278-281.
- Jeffreys, A., Wilson, V., & Thein, S. (1985). Hypervariable 'minisatellite' regions in human. *Nature* , 314, 67-73.
- Joshi, K., Chavan, P., Warude, D., & Patwardhan, B. (2004). Molecular markers in herbal drug technology. *Current Science* , 25 (2), 160-165.
- Juan, C., Oromi, P., & Hewitt, G. (1995). Mitochondrial DNA phylogeny and sequential colonization of Canary Islands by darkling beetles of the genus *Pimelia* (Tenebrionidae). *Proc R Soc Lond B* , 261, 173–180.
- Jungerius, B. J., Rattink, A. P., Crooijmans, R. P., van der Poel, J. J., van Oost, B. A., te Pas, M. F., et al. (2003). Development of a single nucleotide polymorphism map of porcine chromosome 2. *Animal Genetics* , 34 (6), 429 - 437.
- Kalinowski, S. (2004). Counting alleles with rarefaction: private alleles and hierarchical sampling designs. *Cons Gen* , 5, 539–543.
- Kandpal, R. P., Kandpal, G., & Weissman, S. M. (1994). Construction of libraries enriched for sequence repeats and jumping clones, and hybridization selection for region-specific markers. *Genetics* , 91, 88-92.
- Karas, M., & Hillenkamp, F. (1988). Laser desorption ionization of proteins with molecular masses exceeding 10 000 daltons. *Anal. Chem.* , 60, 2299–2303.



Kashi, Y., & Soller, M. (1999). Functional roles of microsatellites and minisatellites. In D. B. Goldstein, & C. Schlotter (Eds.), *Microsatellites: Evolution and Applications* (pp. 10-23). New York: Oxford university press.

Kashi, Y., King, D., & Soller, M. (1997). Simple sequence repeats as a source of quantitative genetic variation. *Trends Genet.* , 13 (2), 74-78.

Kechik, I. A. (1992). Utilization of freshwater fishes for aquaculture, recreational and capture fisheries in Malaysia. *Conservation and management of freshwater fish and their habitats in peninsular Malaysia* (pp. 7-13). Kuala Lumpur: IPT-AWB collaboration programme.

Keim, P., Kalif, A., Schupp, J., Hill, K., Travis, S. E., Richmond, K., et al. (1997). Molecular evolution and diversity in *Bacillus anthracis* as detected by amplified fragment length polymorphism markers. *J. Bacteriol.* , 179 (3), 818-824.

Kellogg, D., Rybalkin, I. C., Mukhamedova, N., Vlasik, T., Siebert, P., & Chenchik, A. (1994). TaqStart Antibody: "hot start" PCR facilitated by a neutralizing monoclonal antibody directed against Taq DNA polymerase. *Biotechniques* , 16 (6), 1134-1137.

Khan, M. S., Lee, P. K., Cramphorn, J., & Zakaria-Ismail, M. (1996). *Freshwater fishes of the Pahang river basin*. (J. Howes, & R. D'Cruz, Eds.) Kuala Lumpur: Wetlands International-Asia Pacific.

Kijas, J., Fowler, J., Garbett, C., & Thomas, M. (1994). Enrichment of microsatellites from the citrus genome using biotinylated oligonucleotide sequences bound to streptavidin-coated magnetic particles. *Biotechniques* , 16 (4), 656-660, 662.

- Kim, J. J., Farnir, F., Savell, J., & Taylor, J. F. (2003). Detection of quantitative trait loci for growth and beef carcass fatness traits in a cross between *Bos taurus* (Angus) and *Bos indicus* (Brahman) cattle. *J. Anim. Sci.* , 81, 1933-1942.
- Kimura, M., & Crow, J. F. (1964). The number of alleles that can be maintained in a finite population. *Genetics* , 49, 725-738.
- Kitanishi, S., Yamamoto, T., & Higashi, S. (2009). Microsatellite variation reveals fine-scale genetic structure of masu salmon, *Oncorhynchus masou*, within the Atsuta River. *Ecology of Freshwater Fish* , 18, 65–71.
- Klein-Lankhorst, R., Vermunt, A., Weide, R., Liharska, T., & Zabel, P. (1991). Isolation of molecular markers for tomato (*Lycopersicon esculentum*) using random amplified polymorphic DNA (RAPD). *Theor Appl Genet* , 83, 108-114.
- Kocher, T. D., Lee, W.-J., Sobolewska, H., Penman, D., & McAndrew, B. (1998). A Genetic Linkage Map of a Cichlid Fish, the Tilapia (*Oreochromis niloticus*). *Genetics* , 148, 1225-1232.
- Kochzius, M. (2009). Trends in Fishery Genetics. In R. J. Beamish, & B. J. Rothschild (Eds.), *The Future of Fisheries Science in North America* (Vol. 31, pp. 453-493). Netherlands: Springer Netherlands.
- Kono, T., Sakai, M., & LaPatra, S. E. (2000). Expressed Sequence Tag Analysis of Kidney and Gill Tissues from Rainbow Trout ( *Oncorhynchus mykiss* ) Infected with Infectious Hematopoietic Necrosis Virus. *Marine Biotechnology* , 2 (5), 493-498.
- Kreitman, M. (1983). Nucleotide polymorphism at the Alcohol dehydrogenase locus of *Drosophila melanogaster*. *Nature* , 304, 412–417.

- Kumar, D., Marimuthu, K., Haniffa, M. A., & Sethuramalingam, T. A. (2008). Effect of Different Live Feed on Growth and Survival of Striped Murrel *Channa striatus* larvae. *E.Ü. Su Ürünleri Dergisi* , XXV (2), 105-110.
- Kwok, S., Kellogg, D. E., McKinney, N., Spasic, N., Goda, L., Levenson, C., et al. (1990). Effects of primer-template mismatches on the polymerase chain reaction: Human immunodeficiency virus type 1 model studies. *Nucleic Acids Research* , 18 (4), 999-1005.
- Latorre, A., Hernandez, C., Martinez, D., Castro, J. A., Ramon, M., & Moya, A. (1992). Population structure and mitochondrial DNA gene flow in Old World populations of *Drosophila subobscura*. *Heredity* , 68, 5-24.
- Lee, J. S., Hanford, M. G., Genova, J. L., & Farber, R. A. (1999). Relative stabilities of dinucleotide and tetranucleotide repeats in cultured mammalian cells. *Human Molecular Genetics* , 8, 2567-2572.
- Lee, P. G., & Ng, P. K. (1994). The systematics and ecology of snakeheads (Pisces: Channidae) in Peninsular Malaysia and Singapore. *Hydrobiologia* , 285, 59-74.
- Lee, P., & Ng, P. (1991). The snakehead fishes of the Indo-Malayan region. *Nature Malaysiana* , 16 (4), 113-129.
- Lee, W. J., & Kocher, T. D. (1996). Microsatellite DNA markers for genetic mapping in *Oreochromis niloticus*. *J. Fish Biol.* , 49, 169-171.
- Leuzzi, M. S., Almeida, F. S., Orsi, M. L., & Sodre, L. M. (2004). Analysis by RAPD of the genetic structure of *Astyanax altiparanae* (Pisces, Characiformes) in reservoirs on the Paranapanema River, Brazil. *Genetics and Molecular Biology* , 27 (3), 355-362.

- Levene, H. (1949). On a Matching Problem Arising in Genetics. *Ann Math Stat* , 20 (1), 91-94.
- Levinson, G., & Gutman, G. A. (1987). Slipped-Strand Mispairing: A Major Mechanism for DNA Sequence Evolution. *Mol. Biol. Evol.* , 4 (3), 203-221.
- Lewis, P. O., & Zaykin, D. (2001). *Genetic Data Analysis: Computer program for the analysis of allelic data*. Retrieved December 29, 2009, from Free program distributed by the authors over the internet from : <http://www.eeb.uconn.edu/people/plewis/software.php>
- Li, C. (1955). The Stability of an Equilibrium and the Average Fitness of a Population. *The American Naturalist* , 89 (848), 281-295.
- Li, X., Musikasinthorn, P., & Kumazawa, Y. (2006). Molecular phylogenetic analyses of snakeheads (Perciformes:Channidae) using mitochondrial DNA sequences. *Ichthyological Research* , 53, 148–159.
- Lichten, M. J., & Fox, M. S. (1983). Detection of non-homology-containing heteroduplex molecules. *Nucleic Acids Res.* , 11, 3959-3971.
- Lim, K. K., & Ng, P. K. (1990). *A guide to the freshwater fishes of Singapore*. Singapore Science Centre.
- Lindblad-Toh, K., Wade, C., Mikkelsen, T., Karlsson, E., Jaffe, D. B., Kamal, M., et al. (2005). genome sequence, comparative analysis and haplotype structure of the domestic dog. *Nature* , 438 (7069), 803-319.
- Lio-Po, G. D., Albright, L. J., Traxler, G. S., & Leñaño, E. M. (2003). Horizontal transmission of epizootic ulcerative syndrome (EUS)-associated virus in the snakehead

*Ophicephalus striatus* under simulated natural conditions. *DISEASES OF AQUATIC Organisms* , 57, 213–220.

Lio-Po, G. G., & Lim, S. L. (2002). Infectious diseases of warmwater fish in freshwater. In P. T. Woo, D. W. Bruno, & S. L. Lim (Eds.), *Diseases and disorders of finfish in cage culture* (pp. 231-282). CABI.

Liu, Y.-G., Liu, L.-X., Wu, Z.-X., Lin, H., Li, B.-F., & Sun, X.-Q. (2007). Isolation and characterization of polymorphic microsatellite loci in black sea bream (*Acanthopagrus schlegeli*) by cross-species amplification with six species of the Sparidae family. *Aquat. Living Resour.* , 20, 257–262.

Liu, Z. G., & Cordes, J. F. (2004). Review: DNA marker technologies and their applications in aquaculture genetics. *Aquaculture* , 238, 1-37.

Liu, Z. J., Li, P., Argue, B. J., & Dunham, R. A. (1999). Random amplified polymorphic DNA markers: usefulness for gene mapping and analysis of genetic variation of catfish. *Aquaculture* , 174, 59-68.

Liu, Z., Karsi, A., & Dunham, R. A. (1999). Development of Polymorphic EST Markers Suitable for Genetic Linkage Mapping of Catfish. *Mar. Biotechnol.* , 1, 437–447.

Liu, Z., Nichols, A., Li, P., & Dunham, R. A. (1998). Inheritance and usefulness of AFLP markers in channel catfish (*Ictalurus punctatus* ), blue catfish ( *I. furcatus* ), and their F1, F2, and backcross hybrids. *Molecular and General Genetics* , 258 (3), 260-268.

Lopez-Giraldez, F., Marmi, J., & Domingo-Roura, X. (2007). High Incidence of Nonslippage Mechanisms Generating Variability and Complexity in Eurasian Badger Microsatellites. *Journal of Heredity* , 98, 620-628.

Lynch, M. (1991). The Genetic Interpretation of Inbreeding Depression and Outbreeding Depression. *Evolution* , 45 (3), 622-629.

Lynch, M., & Milligan, B. G. (1994). Analysis of population genetic structure with RAPD markers. *Molecular Ecology* , 3, 91-99.

Lynn K., N. (n.d.). *History of Biology: Inheritance* . Retrieved January 5, 2010, from Biology Reference: <http://www.biologyreference.com/Gr-Hi/History-of-Biology-Inheritance.html>

Marimuthu, K., & Haniffa, M. A. (2007). Embryonic and Larval Development of the Striped Snakehead *Channa striatus*. *Taiwania* , 52 (1), 84-92.

Maxam, A. M., & Gilbert, W. (1977). A new method for sequencing DNA. *Proc.Natl Acad. Sci. USA* , 74, 560–564.

May, B., & Johnson, K. R. (1990). Composite linkage map of salmonid fishes. In S. J. O'Brien (Ed.), *Genetic Maps* (5th ed.). Cold Spring Harbor, N.Y.: Cold Spring Harbor Press.

May, B., Wright, J. E., & Stoneking, M. (1979). Joint segregation of biochemical loci in Salmonidae: Results from experiments with *Salvelinus* and review of the literature on other species. *J. Fish. Res. Bd. Can.* , 36, 1114-1128.

McDonald, D. (2008). *Assessing genetic structure using codominant, allelic markers within and among populations (WAAP analysis), meaning of AE and tips on software-based analyses*. Retrieved February 20, 2010, from Genetic Markers Course in University of Wyoming: <http://www.uwyo.edu/dbmcd/molmark/WAAP.html>

- Miller, M. J., & Yuan, B.-Z. (1997). Semiautomated Resolution of Overlapping Stutter Patterns in Genomic Microsatellite Analysis. *ANALYTICAL BIOCHEMISTRY* , 251, 50–56.
- Milstein, A., & Prein, M. (1993). Factor and canonical correlation analysis of Nile tilapia production in integrated livestock-fish culture in the Philippines. In M. Prein, G. Hulata, & D. Pauly (Eds.), *Multivariate methods in aquaculture research: case studies of Tilapias in experimental and commercial systems* (pp. 67-74). The WorldFish Center.
- Mohsin, A. M., & Ambak, A. M. (1983). *Freshwater fishes of peninsular Malaysia*. Kuala Lumpur: University Pertanian Press.
- Moller, D. (1970). Transferrin polymorphism in Atlantic salmon (*Salmo salar*). *J. Fish Res. Bd Can.* , 27, 1617-1625.
- Mueller, U. G., & Wolfenbarger, L. L. (1999). AFLP genotyping and fingerprinting. *TREE* , 14 (10), 389-394.
- Neff, B. D., & Gross, M. R. (2001). Microsatellite evolution in vertebrates: inference from ac dinucleotide repeats. *Evolution* , 55 (9), 1717–1733.
- Nei, M. (1978). Estimation of average heterozygosity and genetic distance from a small number of individuals. *Genetics* , 583-590.
- Nei, M. (1972). Genetic distance between populations. *American Naturalist* , 106, 283-292.
- Nei, M. (1978). The theory of genetic distance of the evolution of human races. *Japanese Journal of Human Genetics* , 23, 341-369.

- Nei, M., Maruyama, T., & Chakraborty, R. (1975). The Bottleneck Effect and Genetic Variability in Populations. *Evolution* , 29 (1), 1-10.
- Nielsen, J. G., Wright, J., Morris, D., & Thomas, W. (1994). Biogeographic distributions of mitochondrial and nuclear markers for southern steelhead. *Mol. Mar. Biol. Biotech.* , 3, 281±293.
- Nirenberg, M. (1963). The genetic code: II. *Sci.Am* , 208, 80–94.
- Norris, A. T., Bradley, D. G., & Cunningham, E. P. (1999). Microsatellite genetic variation between and within farmed and wild Atlantic salmon (*Salmo salar*) populations. *Aquaculture* , 180, 247–264.
- O'Connell, M., & Wright, J. M. (1997). Microsatellite DNA in fishes. *Reviews in Fish Biology and Fisheries* , VII, 331-363.
- O'Connell, M., Danzmann, R. G., Cornuet, J.-M., Wright, J. M., & Ferguson, M. M. (1997). Differentiation of rainbow trout (*Oncorhynchus mykiss*) populations in Lake Ontario and the evaluation of the stepwise mutation and infinite allele mutation models using microsatellite variability. *Can. J. Fish. Aquat. Sci.* , 54 (6), 1391–1399.
- Ohta, T., & Kimura, M. (1973). A model of mutation appropriate to estimate the number of electrophoretically detectable alleles in a finite population. *Genetical Research* , 22, 201-204.
- Orita, M., Iwahana, H., Kanazawa, H., Hayashi, K., & Sekiya, T. (1989). Detection of polymorphisms of human DNA by gel electrophoresis as single-strand conformation polymorphisms. *Proc. Natl. Acad. Sci. USA* , 86, 2766-2770.



- Ostrander, E. A., Jong, P. M., Rine, J., & Duyk, G. (1992). Construction of small-insert genomic DNA libraries highly enriched for microsatellite repeat sequences. *Genetics* , 89, 3419-3423.
- Oudet, C., Mornet, E., Serre, J. L., Thomas, F., Lentjes-Zengerling, S., Kretz, C., et al. (1993). Linkage Disequilibrium between the Fragile X Mutation and Two Closely Linked CA Repeats Suggests That Fragile X Chromosomes Are Derived from a Small Number of Founder Chromosomes. *Am. J. Hum. Genet* , 52, 297-304.
- Pandian, T. J., & Bhaskaran, R. (1983). Food utilization in the fish *Channa striatus* exposed to sublethal concentrations of DDT and methyl parathion. *Proc. Indian Acad. Sci (Anim. Sci.)* , 92 (6), 475-481.
- Parameswaran, S., & Murugesan, V. K. (1976). Observations on the hypophysation of murels (Ophicephalidae). *Hydrobiologia* , 50 (1), 81-87.
- Paripatananont, T. (2002). Snakehead and Pangasius Catfish. In C. D. Webster, & C. Lim, *Nutrient requirements and feeding of finfish for aquaculture* (pp. 396-402). Oxon: CABI.
- Park, K. C., Osborne, J. A., Tsoi, S. C., Brown, L. L., & Johnson, S. C. (2005). Expressed sequence tags analysis of Atlantic halibut (*Hippoglossus hippoglossus*) liver, kidney and spleen tissues following vaccination against *Vibrio anguillarum* and *Aeromonas salmonicida*. *Fish & Shellfish Immunology* , 18 (5), 393-415.
- Parker, P. G., Snow, A. A., Schug, M. D., Booton, G. C., & Fuerst, P. A. (2003). What molecules can tell us about populations: Choosing and using a molecular marker. *Ecology* , 79 (2), 361-382.

- Petes, T. D., Greenwell, P. W., & Dominska, M. (1997). Stabilization of Microsatellite Sequences by Variant Repeats in the Yeast *Saccharomyces cerevisiae*. *Genetics* , 146, 491-498.
- Phen, C., Thang, T. B., Baran, E., & Vann, L. S. (2005). *Monograph on Channa striata* (Vol. I). Penang, Malaysia: The WorldFish Center.
- Phillips, R. D., Storey, A. W., & Johnson, M. S. (2009). Genetic structure of *Melanotaenia australis* at local and regional scales in the east Kimberley, Western Australia. *Journal of fish biology* , 74 (2), 437-451.
- Pokar, M., Atkins, C., Francis, R., & Raymer, D. (2009, May). A fishy story about wound healing. *Asia Research News* (1), p. 16.
- Poompuang, S., & Hallerman, E. M. (1997). Toward detection of quantitative trait loci and marker-assisted selection in fish. *Reviews in Fisheries Science* , 5 (3), 253 - 277 .
- Postlethwait, J.H., Johnson, S., Midson, C., Talbot, W., Gates, M., et al. (1994). A genetic linkage map for the zebrafish. *Science* , 264, 699-703.
- Poulsen, A., Poeu, O., Viravong, S., Suntornratana, U., & Tung, N. T. (2002, October). Fish migrations of the Lower Mekong River Basin: implications for development, planning and environmental management. *MRC Technical Paper* (8), pp. 1-62.
- Pritchard, J. K., Stephens, M., & Peter, D. (2000). Inference of Population Structure Using Multilocus Genotype Data. *Genetics* , 155, 945–959.
- Prodiuhl, P. A., Taggart, J. B., & Ferguson, A. (1995). A panel of minisatellite (VNTR) DNA locus specific probes for potential application to problems in salmonid aquaculture. *Aquaculture* , 137, 87-97.

- Qin, J., & Fast, A. W. (1996). Size and feed dependent cannibalism with juvenile snakehead *Channa striatus*. *Aquaculture* , 144, 313-320.
- Qin, J., Fast, A. W., & Kal, A. T. (1997). Tolerance of snakehead *Channa striatus* to ammonia at different pH. *Journal of the World Aquaculture Society* , 28, 87-90.
- Qin, J., Fast, A. W., DeAnda, D., & Weidenbach, R. P. (1997). Growth and survival of larval snakehead ( *Channa striatus*) fed different diets. *Aquaculture* , 148, 105-113.
- Qin, J., He, X., & Fast, A. W. (1997). A bioenergetics model for an air-breathing fish, *Channa striatus*. *Environmental Biology of Fishes* , 50, 309-318.
- Queller, D., Strassmann, J., & Hughes, C. (1993). Microsatellites and Kinship. *Trends in Ecology & Evolution* , VIII (8), 285-288.
- Rainboth, W. J., & FAO. (1996). Suborder Callionymoidei. In W. J. Rainboth, & FAO, *Fishes of the Cambodian Mekong* (pp. 193-227). Rome: Food & Agriculture Org.
- Raymond, M., & Rousset, R. (1995). genepop (Version 1.2): population genetics software for exact tests and ecumenicism. *Journal of Heredity* , 86, 248-249.
- Rice, W. R. (1989). Analyzing tables of statistical tests. *Evolution* , 43 (1), 223-225.
- Richards, R. I., Holman, K., Yu, S., & Sutherland, G. R. (1993). Fragile X syndrome unstable element, p(CCG)<sub>n</sub>, and other simple tandem repeat sequences are binding sites for specific nuclear proteins. *Hum. Mol. Genet.* , 2, 1429-1435.
- Richmond, T., & Somerville, S. (2000). Chasing the dream: plant EST microarrays. *Current Opinion in Plant Biology* , 3, 108-116.

- Rico, C., Zadworny, D., Kuhnlein, U., & Fitzgerald, G. (1993). Characterization of hypervariable microsatellite loci in the threespine stickleback *Gasterosteus aculeatus*. *Molecular Ecology* , 2 (4), 271-272.
- Rise, M. L., von Schalburg, K. R., Brown, G. D., Mawer, M. A., Devlin, R. H., Kuipers, N., et al. (2004). Development and Application of a Salmonid EST Database and cDNA Microarray: Data Mining and Interspecific Hybridization Characteristics. *Genome Res.* , 14, 478-490.
- Rodrigues, K. F., & Kumar, S. V. (2009). Isolation and characterization of 24 microsatellite loci in *Paphiopedilum rothschildianum*, an endangered slipper orchid. *Conserv Genet* , 2009, 127–130.
- Royle, N. J., Clarkson, R., Wong, Z., & Jeffreys, A. J. (1987). Preferential localization of hypervariable minisatellites near human telomeres. *Human Gene Mapping* 9. 46, p. 685. Paris: Cytogenetic and Genome Research.
- Rozen, S., & Skaletsky, H. J. (2000). *Primer3 on the WWW for General Users and for Biologist Programmers*. (S. Krawetz, & S. Misener, Eds.) Totowa, NJ: Humana Press.
- Saiki, R. K., Gelfand, D. H., Stoffel, S., Scharf, S. J., Higuchi, R., Horn, G. T., et al. (1988). Primer-directed enzymatic amplification of DNA with a thermostable DNA with a Thermostable DNA polymerase. *Science* , 239, 487-491.
- Salleh, K. B. (2009). Global Warming, Vulnerability and Policy Implications for Malaysia. In B. Hassan, & H. Mitkees (Ed.), *Malaysia in Global Perspective, Proceeding on the conference on malaysia 2009*. Cairo: Department of Malaysian studies, Cairo University.

Sambrook, J., & Russell, D. W. (2001). Protocol 12: Rapid Characterization of DNAs cloned in Prokaryotic vectors. In J. Sambrook, & D. W. Russell, *Molecular cloning: a laboratory manual* (3rd, Illustrated ed., Vol. II, pp. 8.72-8.76). CSHL Press.

Sanger, F., & Coulson, A. R. (1975). A rapid method for determining sequences in DNA by primed synthesis with DNA polymerase. *J.Mol. Biol.* , 94, 441–448.

Schena, M., Shalon, D., Heller, R., Chai, A., Brown, P. O., & Davis, R. W. (1996). Parallel human genome analysis: Microarray-based expression monitoring of 1000 genes. *Proc. Natl. Acad. Sci. USA* , 93, 10614-10619.

Scopoli. (2004). *channa*. Retrieved September 19, 2009, from Integrated Taxonomic Information System:  
[http://www.its.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=166662](http://www.its.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=166662)

Scribner, K. T., & Pearce, J. M. (2000). Microsatellites: evolutionary and methodological background and empirical applications at individual, population and phylogenetic levels. In A. J. Baker (Ed.), *Molecular methods in ecology* (pp. 235-273). London: Wiley-Blackwell.

Sekino, M., Hara, M., & Taniguchi, N. (2002). Loss of microsatellite and mitochondrial DNA variation in hatchery strains of Japanese flounder *Paralichthys olivaceus*. *Aquaculture* , 213, 101-122 .

Sellner, E. M., Kim, J. W., McClure, M. C., Taylor, K. H., Schnabel, R. D., & Taylor, J. F. (2007). Board-invited review: Applications of genomic information in livestock. *J. Anim. Sci* , 85, 3148–3158.

- Sharp, P. A., Sugden, B., & Sambrook, J. (1973). Detection of two restriction endonuclease activities in *Haemophilus parainfluenzae* using analytical agarose-ethidium bromide electrophoresis. *Biochemistry* , 12 (16), 3055–3063.
- Shimoda, N., Knapik, E. W., Ziniti, J., Sim, C., Yamada, E., Jackson, D., et al. (1999). Zebrafish Genetic Map with 2000 Microsatellite Markers. *Genomics* , 58 (3), 219-232.
- Siaw-Yang, Y. (1988). Food resource utilization partitioning of fifteen fish species at Bukit Merah Reservoir, Malaysia. *Hydrobiologia* , 157, 143- 160.
- Sick, K. (1961). Haemoglobin Polymorphism in Fishes. *Nature* , 192, 894-896.
- Simamora, A. P. (2009, May 16). Illegal fishing, climate change real threats.
- Smith, C. T., Templin, W., Seeb, J., & Seeb, U. (2005). Single nucleotide polymorphisms provide rapid Single nucleotide polymorphisms provide rapid Single nucleotide polymorphisms provide rapid. *North American Journal of Fisheries Management* , 25, 944–953.
- Sokal, R., & Rohlf, F. (1994). *Biometry: the Principles and Practice of Statistics in Biological Research* (3rd Edition ed.). New York: W.H. Freeman.
- Southern, E. (1979). Detection of specific sequences among DNA fragments separated by gel electrophoresis. 98, 503– 517.
- Southern, E., Mir, K., & Shchepinov, M. (1999). Molecular interactions on microarrays. *nature genetics supplement* , 21, 5-9.
- Stickney, H. J., Schmutz, J., Woods, I. G., Holtzer, C. C., Dickson, M. C., Kelly, P. D., et al. (2002). Rapid Mapping of Zebrafish Mutations With SNPs and Oligonucleotide Microarrays. *Genome Res.* , 12, 1929-1934.

- Sturtevant, A. H. (2001). *A history of Genetics*. New York: CSHL Press.
- Subasinghe, R. P., Shariff, M., Fatimah, M. Y., & Hassan, M. D. (1992). Biological indicators in fish and their potential use in aquatic ecosystem management. *Conservation and management of freshwater and their habitats in peninsular Malaysia* (pp. 65-68). Kuala Lumpur: IPT-AWB collaborative programme.
- Summers, M. L. (2007, July 27). *Summers' Lab Homepage*. Retrieved February 16, 2010, from California State University Northridge: <http://www.csun.edu/~mls42367/Protocols/Colony%20PCR.pdf>
- Sutton, W. (1903). The chromosome in heredity. *Biol. Bull* , *IV*, 231-251.
- Szibor, R., Krawczak, M., Hering, S., Edelmann, J., Kuhlisch, E., & Krause, D. (2003). Use of X-linked markers for forensic purposes. *Int J Legal Med* , *117*, 67–74.
- Taggart, J. B., & Ferguson, A. (1990). Minisatellite DNA fingerprints of salmonid fishes. *Animal Genetics* , *21* (4), 377 - 389.
- Takayama, M., Takayama, N., Inoue, N., & Kameoka, Y. (1996). Application of long PCR method of identification of variations in nucleotide sequences among varicella-zoster virus isolates. *Journal of Clinical Microbiology* , *34* (12), 2869-2874.
- Tamate, H. B., Shibata, K., Tsuchiya, T., & Ohtaishi, N. (1995). Assessment of Genetic Variations within Populations of Sika Deer in Japan by Analysis of Randomly Amplified Polymorphic DNA (RAPD). *Zoological Science* , *12* (5), 669-673.
- Tautz, D. (1989). Hypervariability of simple sequences as a general source for polymorphic DNA markers. *Nucleic Acids Research* , *17* (16), 6463-6471.

Tautz, D., Trick, M., & Dover, G. (1986). Cryptic simplicity in DNA is a major source of genetic variation. *Nature* , 322, 652 - 656.

Taylor, E. (1995). Genetic Variation at Minisatellite DNA Loci Among North Pacific Populations of Steelhead and Rainbow Trout (*Oncorhynchus mykiss*). *The Journal of Heredity* , 86, 354-363.

Taylor, J. W., Geiser, D. M., Burt, A., & Koufopanou, V. (1999). The Evolutionary Biology and Population Genetics Underlying Fungal Strain Typing. *Clinical Microbiology Reviews* , 12 (1), 126-146.

The UniProt Consortium. (2010). The Universal Protein Resource (UniProt) in 2010. *Nucleic Acids Research* , 38, D142–D148.

the\_junglist. (n.d.). *SPECIES: The Striped Snakehead (Channa striata). King of the swamps*. Retrieved January 23, 2010, from Mega Fishing Thailand: <http://www.megafishingthailand.com/content/view/75/53/>

Tingey, S. V., & del Tufo, J. P. (1993). Genetic Analysis with Random Amplified Polymorphic DNA markers. *Plant Physiol.* , 101, 349-352.

Valdes, A. M., Slatkin, M., & Freimer, N. B. (1993). Allele Frequencies at Microsatellite Loci: The Stepwise Mutation Model Revisited. *Genetics* , 133, 737-749.

van Oosterhout, C., Hutchinson, W., Wills, D., & Shipley, P. (2004). MICRO-CHECKER: software for identifying and correcting genotyping errors in microsatellite data. *Mol Ecol Notes* , 4, 535-538.

Vignal, A., Milan, D., SanCristobal, M., & Eggen, A. (2002). A review on SNP and other types of molecular markers and their use in animal genetics. *Genet. Sel. Evol.* , 34, 275-305.



- Vivekanandan, E. (1977). Ontogenetic development of surfacing behaviour in the obligatory air-breathing fish *Channa* (= *Ophiocephalus*) *striatus*. *Physiology & Behavior* , 18 (4), 559-562.
- Vos, P., Hogers, R., Bleeker, M., Reijans, M., van de Lee, T., Hornes, M., et al. (1995). AFLP: a new technique for DNA fingerprinting. *Nucleic Acids Res.* , 23 (21), 4407–4414.
- Waldbieser, G. C., Bosworth, B. G., Nonneman, D. J., & Wolters, W. R. (2001). A Microsatellite-Based Genetic Linkage Map for Channel Catfish, *Ictalurus punctatus*. *Genetics* , 158, 727-734.
- Wallace, D. C., Garrison, K., & Knowler, W. C. (2005). Dramatic founder effects in Amerindian mitochondrial DNAs. *American Journal of Physical Anthropology* , 68 (2), 149 - 155.
- Walsh, P. S., Fildes, N. J., & Reynolds, R. (1996). Sequence analysis and characterization of stutter products at the tetranucleotide repeat locus vWA. *Nucleic Acids Research* , 24 (14), 2807–2812.
- Wang, D. G., Fan, J.-B., Siao, C.-J., Berno, A., Young, P., Sapolsky, R., et al. (1998). Large-Scale Identification, Mapping, and Genotyping of Single-Nucleotide Polymorphisms in the Human Genome. *Science* , 280 (5366), 1077-1082.
- Wang, T.-C., & Chao, M. (2005). The HDV insert in the TOPO-R6 plasmid was also subcloned into another T vector (yT&A; Yeastern Biotech). *J. Virol.* , 79, 2221–2229.
- Waterson, R., Lindblad-Toh, K., Birney, E., Rogers, J., Abril, J. F., Agarwal, P., et al. (2002). Initial sequencing and comparative analysis of the mouse genome. *Nature* , 420, 520-562.

- Watson, J. D., Baker, A. T., Bell, S. P., Gann, A., Levine, M., & Losick, R. (2004). *Molecular Biology of the Gene*. San Francisco: Benjamin Cummings and CSHL press.
- Watson, J., & Crick, F. (1953). Molecular structure of nucleic acids. A structure for deoxyribose nucleic acid. *Nature* , 171, 737-738.
- Weber, J. L., & Wong, C. (1993). Mutation of human short tandem repeats. *Human Molecular Genetics* , 2 (6), 1123-1128.
- Weber, M., & de Beaufort, L. (1922). In *Archipelago, The Fishes of the Indo-Australian* (Vol. IV, pp. 312-330). Leiden: Brill Archive.
- Weinberg, W. (1908). On the demonstration of heredity in man. *Lecture at the scientific evening at Stüttgart* , 64, 368-382.
- Weir, B. S. (1996). *Genetic data analysis II: Methods for Discrete Population Genetic Data* (2nd Edition ed.). Sunderland , MA, USA: Sinauer Associates.
- Weir, B. S., & Cockerham, C. C. (1984). Estimating F-Statistics for the Analysis of Population Structure. *Evolution* , 38 (6), 1358-1370.
- Wilcox, & B.A. (1984). In situ conservation of genetic resources: determinants of minimum area requirements. In J. A. McNeely, & K. R. Miller (Ed.), *National Parks, conservation and development: the role of protected areas in sustaining society*. (pp. 639-647). Washington D.C.: Smithsonian Institution Press.
- Williams, D. R., Li, W., Hughes, M. A., Gonzalez, S. F., Vernon, C., Vidal, M. C., et al. (2008). Genomic resources and microarrays for the common carp *Cyprinus carpio* L. *Journal of Fish Biology* , 72 (9), 2095 - 2117.

Williams, J. G., Kubelik, A. R., Livak, K. J., Rafalski, J. A., & Tingey, S. V. (1990). DNA polymorphisms amplified by arbitrary primers are useful as genetic markers. *Nucleic Acids Res.* , 18 (22), 6531–6535.

Wilson, A. C., Cann, R. L., Carr, S. M., George, M., Gyllensten, U., Helm-Bychowski, K. M., et al. (1985). Mitochondrial DNA and two perspectives on evolutionary genetics. *Biological Journal of the Linnean Society* , 26 (4), 375 - 400.

Wirgin, I. I., & Waldman, J. R. (1994). What DNA Can Do For You. *Fisheries* , 19, 16-27.

Wong, A., Forbes, M. R., & Smith, M. L. (2001). Characterization of AFLP markers in damselflies: prevalence of codominant markers and implications for population genetic applications. *Genome* , 44 (4), 677–684.

Wong, Z., Wilson, V., Patel, I., Povey, S., & Jeffries, A. (1987). Characterization of a panel of highly variable minisatellites cloned from human DNA. *Ann. Hum. Genet.* , 51, 269-288.

World Records Freshwater Fishing. (n.d.). *Channa striata*. (H. Machacek, Ed.) Retrieved January 25, 2010, from Fishing World Records: <http://www.fishing-worldrecords.com/perches/Channastriata.html>

World Resources Institute. (2000, April). *A Guide to World Resources 2000–2001: People and Ecosystems: The Fraying Web of Life*. Retrieved February 27, 2010, from World Resources Institute: [http://pdf.wri.org/world\\_resources\\_2000-2001\\_people\\_and\\_ecosystems.pdf](http://pdf.wri.org/world_resources_2000-2001_people_and_ecosystems.pdf)

World Resources Institute. (n.d.). *Biodiversity in freshwater ecosystems*. Retrieved February 27, 2010, from Global Biodiversity Strategy: Guidelines for action to save,

study and use Earth's biotic wealth sustainably and equitably:

<http://www.wri.org/publication/content/8203>

Wright, D., Nakamichi, R., Krause, J., & Butlin, R. K. (2006). QTL Analysis of Behavioral and Morphological Differentiation Between Wild and Laboratory Zebrafish (*Danio rerio*). *Behavior Genetics* , 36 (2), 271–284.

Wright, J. M. (1994). Mutation at VNTRs: Are minisatellites the evolutionary progeny of microsatellites? *Genome* , 345-347.

Wright, J. M., & Bentzen, P. (1994). Microsatellites: genetic markers for the future. *Reviews in Fish Biology and Fisheries* , 4, 384-388.

WWF-Malaysia. (n.d.). *About WWF-Malaysia and its environmental conservation work*. Retrieved February 26, 2010, from WWF-Malaysia: [http://www.wwf.org.my/about\\_wwf/](http://www.wwf.org.my/about_wwf/)

Wyman, A., & White, R. (1980). A highly polymorphic locus in human DNA. *Proc. Natl Acad. Sci.* , 77, 6754-6758.

Yamamoto, M. N., & Tagawa, A. W. (2000). *Hawaii's Native and Exotic Freshwater Animals*. Honolulu: Mutual Pub.

Yan, G., Romero-Severson, J., Walton, M., Chadee, D. D., & Severson, D. W. (1999). Population genetics of the yellow fever mosquito in Trinidad: comparisons of amplified fragment length polymorphism (AFLP) and restriction fragment length polymorphism (RFLP) markers. *Molecular* , 8, 951–963.

Yeh, F., Yang, R., Boyle, T., Zhihong, Y., Mao, J. X., & Yeh, D. (1997). POPGENE, the User-Friendly Shareware for Population Genetic Analysis. Edmonton, Alberta, Canada: Molecular Biology and Biotechnology Centre, University of Alberta.

- Yi, Y., Diana, J. S., Shrestha, M. K., & Lin, C. K. (2004). Culture of mixed-sex Nile tilapia with predatory snakehead. In R. Bolivar, G. Mair, & K. Fitzsimmons (Ed.), *The 6th International Symposium of Tilapia in Aquaculture*, (pp. 464-667). Manila.
- Yin, X., Stam, P., Dourleijn, C. J., & Kropff, M. J. (1999). AFLP mapping of quantitative trait loci for yield-determining physiological characters in spring barley. *TAG Theoretical and Applied Genetics*, 99, 244-253.
- Zakaria-Ismail, M. (1991). Freshwater fishes in Peninsular Malaysia. In R. Kiew (Ed.), *The state of nature conservation in Malaysia* (pp. 115-119). Kuala Lumpur: Malayan Nature Society.
- Zakaria-Ismail, M. (1992). Identification of major threats of fish diversity in Malaysia. *Conservation and management of freshwater fish and their habitats in peninsular Malaysia* (pp. 61-64). Kuala Lumpur: IPT-AWB collaborative programme.
- Zane, L., Bargelloni, L., & Patarnello, T. (2002). Strategies for microsatellite isolation: a review. *Molecular Ecology*, 11, 1-16.
- Zhivotovsky, L. A., Feldman, M. W., & Grishchkin, S. A. (1997). Biased Mutations and Microsatellite Variation. *Mol. Biol. Evol.*, 14 (9), 926-933.
- zipcodezoo. (2009, July 2). *Channa striata*. Retrieved January 30, 2010, from zipcodeZoo: [http://zipcodezoo.com/Animals/C/Channa\\_striata/Default.asp](http://zipcodezoo.com/Animals/C/Channa_striata/Default.asp)
- Zuraini, A., Somchit, M., Solihah, M., Goh, Y., Arifah, A., Zakaria, M., et al. (2006). Fatty acid and amino acid composition of three local Malaysian *Channa* spp. fish. *Food Chemistry*, 97, 674-678.