2007

A Biblical Word Analysis for the Landfowl (Aves: Galliformes)

Michelle McConnachie

Timothy R. Brophy
Liberty University, tbrophy@liberty.edu

most mutations argues against the evolution of infectious viruses (especially complex retroviruses) from ERVs. Exogenous viruses might have been created simultaneously with their endogenous counterparts during the creation week. Transmission and propagation of infectious retroviruses among the host population could have helped in maintenance of the endogenous viral sequences via recombination, in a way similar to recombinational DNA repair and modern gene therapy.

Coffin, J.M. 1996. *Retroviridae*: the viruses and their replication. In: Field, B.N., D.M. Knipe, P.M. Howley, R.M. Chanock, J.L Melnick, T.P. Monath, B. Roizman, and S.E. Straus, eds. *Fields Virology*, *3rd ed.* Lippincott-Raven Publishers, Philadelphia, PA, pp. 1767-1847.

Cooper, G.M. and R.E.Hausman. 2004. *The Cell, a Molecular Approach.* ASM Press, Washington, D.C.

Dunlap, K.A., M. Palmarini, M. Varela, R.C. Burghardt, K. Hayashi, J.K. Farmer, and T.E. Spencer. 2006. Endogenous retroviruses regulate periimplantation placental growth and differentiation. *Proceedings of the National Academy of Sciences, USA* 103:14390-14395.

Frendo, J.L., D. Olivier, V. Cheynet, J.L. Blond, O. Bouton, M. Vidaud, M. Rabreau, D. Evain-Brion, and F. Mallet. 2003. Direct involvement of HERV-W Env glycoprotein in human trophoblast cell fusion and differentiation. *Molecular and Cellular Biology* 23:3566-3574.

Jaenisch, R.F. 1976. Germline integration and Mendelian transmission of the exogenous Moloney leukemia virus. *Proceedings of the National Academy of Sciences, USA* 73:1260-4.

Mallet, F., B. Oliver, S. Prudhomme, V. Cheynet, G. Oriol, B. Bonnaud, G. Lucotte, L. Duret, and B. Mandrand. 2004. The endogenous retroviral locus ERVWE1 is a bona fide gene involved in hominoid placental physiology. *Proceedings of the National Academy of Sciences, USA* 101:1731-1736.

Okulicz, W.C. and C.I. Ace. 2003. Temporal regulation of gene expression during the expected window of receptivity in the rhesus monkey endometrium. *Biology of Reproduction* 69:1593-1599.

Prudhomme, S., G. Oriol, and F. Mallet. 2004. A retroviral promoter and a cellular enhancer define a bipartite element which controls *env* ERVWE1 placental expression. *Journal of Virology* 78:12157-12168.

C13. A Biblical Word Analysis for the Landfowl (Aves: Galliformes)

M. McConnachie & T.R. Brophy
Liberty University

The Old Testament Scriptures are a valuable source of baraminological information, both in setting apobaraminic limits and suggesting the rate/mode of post-Flood diversification (Wood, 2002). We performed a biblical word analysis as part of a larger baraminological study of the landfowl. The landfowl include such well known birds as chickens, turkeys, pheasants, grouse, quail, partridges, and peacocks. We first compiled a list of 31 words that had the potential to be found in the English Old Testament. Next, we used *Bible Gateway* (http://www.biblegateway.com) and the *University of Virginia's Electronic Text Center* (http://etext.virginia.edu) to locate specific uses in the following translations: KJV, NKJV, NASB, NIV, and RSV. Finally, we used *BibleWorks* (2003), three concordances (Strong, 1984; Goodrick and Kohlenberger, 1990; Kohlenberger and Swanson, 1998), and several lexicons (Brown et al., 2005; Koehler and Baumgartner, 1958; Holladay, 1974; Tregelles, 1979; VanGemeren, 1997) to verify our understanding of the original Hebrew/Aramaic words. Seven of the 31 words are found in at least one English translation. These are used 94 times and correspond to 16 Hebrew/Aramaic words. Eighty-one occurrences come from Hebrew/Aramaic words (*'ôp*, *'ôpā*, *ṣippôr*, *ṣippar*, *'ayiṭ*, *yâqûš*, *yqš*, *yâqôš*) that refer to a general fowl/bird category or to birds of prey, and are therefore of little value in delimiting landfowl baramins. Seven occurrences come from Hebrew words (*barbur*, *tinšemet*, *'ls*, *tukkiyyîm*, *motnayim*, *zarzîr*) for which translation differences exist in the English text. In most of these cases, the lexicons are also uncertain of translation, and generally give multiple possibilities. Six occurrences, however, probably refer to members of the landfowl order. The Hebrew word *qōrē'*, found in both I Samuel 26: 20 and Jeremiah 17:11, is translated "partridge" in all English versions. All lexicons agree that *qōrē'*, named for its call, is usually translated "partridge". Aharoni (1938) identifies this bird as *Ammoperdix hayi* (sand partridge), which is native to the Dead Sea region of Palestine. In I Samuel 26:20, *qōrē'* is hunted in the mountains. Similarly, sand partridges are game birds frequently found in hilly regions. Jeremiah 17:11 refers to the tendency of two sand partridge females, one of whom is eventually displaced, to lay their eggs in a single hole. The most interesting references to landfowl in the Old Testament, however, come in connection with God's sending of quail to the Israelites in the wilderness (Exodus 16:13, Numbers 11:31-32, Psalm 105:40). The Hebrew word *śᵉlâw* is translated "quail" in all English versions. All lexicons agree that *śᵉlâw*, named for its fatness, is translated "quail". Four of the lexicons (all but VanGemeren, 1997) refer to this bird as *Coturnix*. Large flocks of quail (*Coturnix coturnix*) still migrate north over the Red Sea and arrive at the Sinai Peninsula after wintering in Africa. Such flocks are frequently so weakened after this journey, that they fall to the ground in exhaustion and can easily be caught by hand (Meier, 1991; Klemm, 1993). In God's timing and by His direction, quail were sent as both an expression of God's graciousness (Exodus 16) and wrath (Numbers 11) towards the Israelites (Kiuchi, 1997). Psalm 78:26-30 does not specifically mention quail, but clearly retells the Numbers 11 account of God's judgment. These events suggest that the migratory habits of *C. coturnix*, which descended from some other species on the Ark, were fully established within one millennium after the Flood (Ussher, 1658; Dryer, 1983). Although interesting and inherently edifying, none of these Old Testament references are useful for setting baraminic limits in the landfowl.

Aharoni, I. 1938. On some animals mentioned in the Bible. *Osiris* 5:461-478.

BibleWorks, 2003. *BibleWorks 6.0: Software for Biblical Exegesis and Research*. BibleWorks, LLC, Norfolk, VA.

Brown, F., S. Driver, and C. Briggs. 2005. *The Brown-Driver-Briggs Hebrew and English Lexicon: With an Appendix Containing the Biblical Aramaic, 9th printing*. Reprinted from the 1906 edition originally published by Houghton, Mifflin, and Co., Boston. Hendrickson Publ., Peabody, MA.

Dryer, C.H. 1983. The date of the Exodus reexamined. *Bibliotheca Sacra* 140: 225-243.

Goodrick, E.W., and J.R. Kohlenberger, eds. 1990. *The NIV Exhaustive Concordance*. Zondervan, Grand Rapids, MI.

Holladay, W.L. 1974. *A Concise Hebrew and Aramaic Lexicon of the Old Testament: Based Upon the Lexical Work of Ludwig Koehler and Walter Baumgartner, 2nd impression*. William B. Eerdmans Publ. Co., Grand Rapids, MI.

Kiuchi, N. 1997. (*śᵉlāw*), quail (#8513). In: VanGemeren, W.A., ed. *New International Dictionary of Old Testament Theology and Exegesis, Vol. 3*. Zondervan, Grand Rapids, MI, p. 1246.

Klemm, R. 1993. Die Hühnervögel (Galliformes): Taxonomische Aspekte unter besonderer Berücksichtigung artübergreifender Kreuzungen. In: Scherer, S.,

ed. *Typen des Lebens*. Pascal-Verlag, Berlin, Germany, pp. 159-184.
Koehler, L., and W. Baumgartner, eds. 1958. *Lexicon in Veteris Testamenti Libros*. E.J. Brill, Leiden, The Netherlands.
Kohlenberger III, J.R., and J.A. Swanson. 1998. *The Hebrew English Concordance to the Old Testament: With the New International Version*. Zondervan Publ. House, Grand Rapids, MI.
Meier, J. 1991. Birds. In: Butler, T.C., ed. *Holman Bible Dictionary*. Broadman & Holman Publishers, Nashville, TN.
Strong, J. 1984. *The New Strong's Exhaustive Concordance of the Bible*. T. Nelson Publ., Nashville, TN.
Tregelles, S.P. (translator). 1979. *Gesenius' Hebrew and Chaldee Lexicon to the Old Testament Scriptures*. Baker Book House Co., Grand Rapids, MI.
Ussher, J. 1658. *Annals of the World*. 2003 English Revision of James Ussher's Classic Survey of World History, Larry and Marion Pierce, eds. Master Books, Green Forest, AR.
VanGemeren, W.A., ed. 1997. *New International Dictionary of Old Testament Theology and Exegesis, Vols. 1-5*. Zondervan, Grand Rapids, MI.
Wood, T.C. 2002. A baraminology tutorial with examples from the grasses (Poaceae). *TJ* 16(1):15-25.

C14. Taxonomic Distribution of "Thorns and Thistles"

R.W. Sanders
Bryan College

Conventional theory holds that plant thorns and similar structures evolved in ancestors of lineages ranging from single species to whole families. In these lineages, mutations arose and were selected to allow structures to be modified as piercing weapons, as follows: entire stems (thorns), the leaf or leaf parts (spines), or epidermis (prickles and stinging hairs). Accordingly, the selective pressure is protection from herbivorous vertebrates. These structures are alluded to by "thorns and thistles" in the curse on Adam (Gen. 3:17-19) and, therefore, must figure into any Biblical understanding of the origin of natural evil. The Hebrew *qôs* is best rendered as thornbush, *dardar* as a type of thistle; together as a pair they intensify thorniness (Younger 1997). Thus, the intended reference is to armed plants with which physical contact is unpleasant or harmful, as commonly understood by botanists ("armed: possessing sharp projections, such as prickles, spines, or thorns," Diggs *et al*. 1999, p. 1424). With reference to building a creationist model of the origin of plant armature, the objective of this study is to lay the foundation for an understanding of the distribution of physical armature among plant baramins.

The families of flowering plants were surveyed in the literature for the relative occurrence of species bearing thorns, spines, prickles, or stinging hairs (Hansen & Rahn 1969; Cronquist 1981; Goldberg 1986, 1989; Gentry 1993). The number of baramins represented is not known; however, previous baraminic studies suggest that even the larger families comprise only one to a few holobaramins (Wood 2006). Armed species apparently occur in only 110 of the 252 families recognized. Thorns, spines, and prickles are widely distributed among the 110 families, but stinging hairs are limited to only four families. There were 58 families, including two of the largest (7,000 and 10,000 species), with only one or a few isolated armed species or genera. Armed plants are common (but not predominant) in 35 small to large families (50 to 5,000 species each), whereas armed species predominate in only 11 small to medium families (26 to 2,000 species each). Strikingly, only six families are universally armed or nearly so. Five of these are relatively small (Fouquieriaceae [10 spp], Didieriaceae [15 spp], Smilaceae [575 spp], Pandanaceae [700 spp], and Agavaceae [700 spp]), but only one, Cactaceae (2,000 spp), is moderately sized. Within the families in which armed species are common or predominant, the armed species are usually concentrated in a few large genera or groups of related genera. Of special interest is that, within some families (e.g., Rosaceae), one form of armature occurs in multiple, distantly related groups (prickles in roses and blackberries) and other structures occur in yet other separated groups (thorns in hawthorns and plums). Taken together, these data suggest that entire baramins probably were not created armed. Since plant baramins likely survived the Flood as multiple individuals and certain pre-Flood monobaramins were armed, some currently armed monobaramins may represent descendants of pre-Flood "thorns and thistles," whereas others probably do not. Post-Flood speciation mechanisms are required to account for the diversity and number of the currently armed species.

Cronquist, A. 1981. *An Integrated System of Classification of Flowering Plants*. Columbia University Press, New York.
Diggs, G.M., B.L. Lipscomb, and R J. O'Kennon. 1999. *Shinners & Mahler's Illustrated Flora of North Central Texas*. Botanical Research Institute of Texas, Ft. Worth.
Goldberg, A. 1986. Classification, evolution, and phylogeny of the families of dicotyledons. *Smithsonian Contributions to Botany* 58:1-314.
Goldberg, A. 1989. Classification, evolution, and phylogeny of the families of monocotyledons. *Smithsonian Contributions to Botany* 71:1-74.
Hansen, B. and K. Rahn. 1969. Determination of angiosperm families by means of a punched card system. *Dansk Botanisk Arkiv* 26. Data accessed 9 Jan 2007 through website: ActKey--Families of Angiosperms by Bertel Hansen & Knud Rahn, http://flora.huh.harvard.edu:8080/actkey/.
Gentry, A.H. 1993. *Woody Plants of Northwest South America.* Conservation International, Washington, D.C.
Younger, K.L 1997. Entries #1998 and #7764. In: VanGemeren, W.A., ed. *New International Dictionary of Old Testament Theology & Exegesis*. Zondervan Publ., Grand Rapids, MI, pp. 907, 984.
Wood, T.C. 2006. The current status of baraminology. *Creation Research Society Quarterly* 43: 149-158.

C15. Creation and Carnivory in the Pitcher Plants of Nepenthaceae and Sarraceniaceae

R.W. Sanders & T.C. Wood
Bryan College

Genesis 1:29-30 indicates that God gave plants to animals and people for food, but today there are over 600 species of carnivorous plants that "eat" animals for food. Baraminological analysis can assist us in understanding the origins of plant carnivory, either as the original design or a post-Fall adaptation. All species produce modified leaves or stems ("traps") that capture and digest small animals (mostly arthropods) as a supplementary source of nitrogen, the benefits of which vary according to species (Ellison 2006). Types of traps include pitchers, flypaper, bladder traps, snap traps, or corkscrew traps. Carnivorous species occur in eleven angiosperm families (pitcher plants in only four). Traditional classifications of these families, based on their atypical flowers and vegetative bodies, are contradictory but have been eclipsed recently by molecular phylogenies (Soltis et al. 2005, p. 256ff), which place the pitcher plants in the Caryophyllales (Nepenthaceae, ~90 spp.), Ericales