- Nature, 386(6622):217-219.
- 6. Wu, C, 1997. Molecular motor spins out energy for cells. Science News, 151(12): 173.
- Boyer, P., 1993. Biochimica et Biophysica Acta, 1140:215-250. Cited in: Noji et al, Ref. 4.
- Abrahams, J. P. et al, 1994. Structure at 2.8 A resolution of F₁-ATPase from bovine heart mitochondria. Nature,370(6491):621-628.
- Cross, R. L., 1994. Our primary source of ATP. Nature, 370(6491):594-595.
- Service, R. R, 1997. Awards for high-energy molecules and cool atoms. Science, 278(5338):578-579. The third winner is Jens Skou of the University of Aarhus in
- Denmark. Forty years ago, he was the first to identify an enzyme that moves substances through cell membranes (in this case, sodium and potassium ions). This is a key function of all cells.
- 11. ATP stands for adenosine triphosphate. It is a high energy compound, and releases this energy by losing a phosphate group to give ADP, adenosine diphosphate.
- Dewar, D., Davies, L. M. and Haldane, J. B. S, 1949. Is Evolution a Myth? A Debate between D. Dewar and L. M. Davies vs. J. B. S. Haldane, Watts and Co. Ltd/Paternoster Press, London, p. 90.
- 13. Sarfati, J. D., 1997. Turtles can read

- magnetic maps. Online at <<u>http://www.ChristianAnswers.net/aig/hot/</u>079704.html> (as at Feb. 19, 98).
- 14. Poirier, J. H., 1997. The magnificent migrating monarch. **Creation Ex Nihilo**, 20(1):28—31. But monarchs only use the Earth's magnetic field to give them the general direction, while they rely on the Sun's position for most of their navigation.
- Helder, M, 1998. The world's smallest compasses. Creation Ex Nihilo, 20(2): 52-53.

J. D. Sarfati

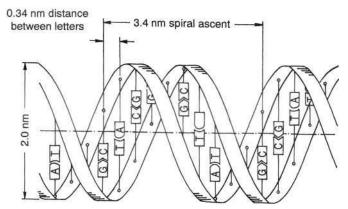
'Junk' DNA (Again)

When introns were discovered, some evolutionists suggested that these represented 'junk' DNA. Introns, as well as other sequences which did not code for protein, were considered to be left-overs of evolutionary ancestry — 'vestigial' DNA.

History has shown the foolishness of rushing to the 'vestigial' argument. Well over 100 organs in the human body were pro-

nounced as useless left-overs of evolution at one stage, but the list has shrunk to almost zero as research has revealed the functions. 1

Little by little, the so-called 'junk' DNA is revealing its functions.² In a further revelation, researchers have found that mutations in an intron interfere with imprinting, the process



The structure and dimensions of the DNA molecule.

by which only certain maternal or paternal genes are expressed, not both. Expression of both genes results in a variety of diseases and cancers. The discovered intron segment in some way promotes the transcription of an antisense-RNA sequence which is involved in suppressing the expression of the paternal gene in this case.

The burgeoning field of molecular biology continues to reveal unimagined complexity in the biochemistry of cells. It would be foolish indeed to pronounce anything as 'junk'. Like the 'vestigial organs' idea, it seems that evolutionary ideas about the molecular machines in cells feed on lack of knowledge.

REFERENCES

- Bergman, J. and Howe, G., 1990. 'Vestigial Organs' are Fully Functional, Creation Research Society Books, Terre Haute, Indiana, USA.
- Wieland, C, 1994. Junk moves up in the world. CEN Tech. J., 8(1): 125.
- Reik, W. and Constancia, M., 1997. Making sense of antisense? Nature, 389:669-671.

D. J. Batten

Bird-Dinosaur Link Challenged

Most palaeontologists not only believe that birds evolved from dinosaurs, they have also convinced themselves that 'Birds are dinosaurs'. 1 Kevin Padian and Paul Olsen assert:

The footprints of ratites should be of special interest to dinosaurian paleontologists because birds are

Their origin living dinosaurs. from Mesozoic coelurosaurian theropods isnow beyond reasonable dispute. . . . *By* cladistic convention, birds must be classified as theropod dinosaurs because thev evolved from theropod dinosaurs. '2

Theropods are small, bipedal carnivorous dinosaurs. This conventional view has reinforced the belief that *Archaeopteryx* is a feathered dinosaur. Cladistics has shown a number of morphological similarities between birds and theropod dinosaurs, such as the similarity in limb structure,