

**TABLE 14.1.** Statistics on sickle-cell genotypes in a Tanzanian population

| Genotype                 | Hb <sup>A</sup> Hb <sup>A</sup> | Hb <sup>A</sup> Hb <sup>S</sup> | Hb <sup>S</sup> Hb <sup>S</sup> | Overall Mean | Variance       |
|--------------------------|---------------------------------|---------------------------------|---------------------------------|--------------|----------------|
| Frequency at birth       | 0.629                           | 0.328                           | 0.043                           |              |                |
| Relative survival, $G$   | 0.837                           | 1                               | 0                               | 0.855        | $V_G = 0.0384$ |
|                          | Hb <sup>A</sup>                 |                                 | Hb <sup>S</sup>                 |              |                |
| Allele frequency         | 0.793                           |                                 | 0.207                           |              |                |
| Mean survival            | 0.871                           |                                 | 0.793                           | 0.855        |                |
| Average excess           | 0.016                           |                                 | -0.062                          | 0            |                |
| Breeding value, $A$      | 0.887                           | 0.809                           | 0.731                           | 0.854        | $V_A = 0.0020$ |
| Dominance deviation, $D$ | -0.050                          | 0.191                           | -0.731                          | 0            | $V_D = 0.0364$ |

Data from Allison A.C. 1956. *Ann. Hum. Genet.* **21**: 67; and Allison A.C. 1965. Population genetics of abnormal haemoglobins and glucose-6-phosphate dehydrogenase deficiency. In *Council for International Organizations for Medical Science Symposium on abnormal haemoglobins in Africa* (ed. J.H.P. Jonxis), pp. 365–391. Blackwell Scientific Publications, Oxford.