



FIGURE 13.1 Main-sequence and post-main-sequence evolutionary tracks of stars with an initial composition of $X = 0.68$, $Y = 0.30$, and $Z = 0.02$. The location of the present-day Sun (see Fig. 13.2) is depicted by the solar symbol (\odot) between points 1 and 2 on the $1 M_{\odot}$ track. The elapsed times to points indicated on the diagram are given in Table 13.1. To enhance readability, only the points on the evolutionary tracks for 0.8 , 1.0 , 1.5 , 2.5 , 5.0 , and $12.0 M_{\odot}$ are labeled. The model calculations include mass loss and convective overshooting. The diagonal line connecting the locus of points 1 is the zero-age main sequence. For complete, and annotated, evolutionary tracks of $1 M_{\odot}$ and $5 M_{\odot}$ stars, see Figs. 13.4 and 13.5, respectively. (Data from Schaller et al., *Astron. Astrophys. Suppl.*, 96, 269, 1992.)