Reconsidering the Proportions-at-age Observed in the November Survey

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During the NRF/SA Pelagic and Rock Lobster Industries International Stock Assessment Workshop, held in July 2007, a mismatch between the preliminary sardine assessment model projected proportion numbers-at-age and those observed during the November spawner biomass survey was noted. A bias factor was estimated for the proportion-at-age 1, while no bias was assumed for ages 2 to 5+. The sardine assessment which provided the basis for OMP-08 testing subsequently did not use this age data (see B.1 of de Moor *et al*. 2009). The model projected proportion numbers-at-age from the sardine assessment used as the basis for OMP-08 testing are compared to the observed proportion numbers-at-age in Figure 1. Note that these proportions are not fit to the observed data in the model. Comparisons are shown for 1993, 1994, 1996, 2001, 2002, 2003 and 2004. These are the years for which ALKs have been estimated from the November surveys by Deon Durholtz.

Figure 2 shows these renormalized proportions for ages 2 to 5+ only, thereby removing any possible mismatch due to the lack of bias estimated for age 1.

In addition, Figure 3 shows the raised length frequencies used in calculating the proportion numbers-at-age for the November surveys.

References

de Moor, C.L., Butterworth, D.S., Durholtz, D., and van der Lingen, C. 2009. Progress on Recommendations from Previous Workshop: Sardine and Anchovy. MARAM International Stock Assessment Workshop, December 2008. MARAM IWS/DEC08/S/4.

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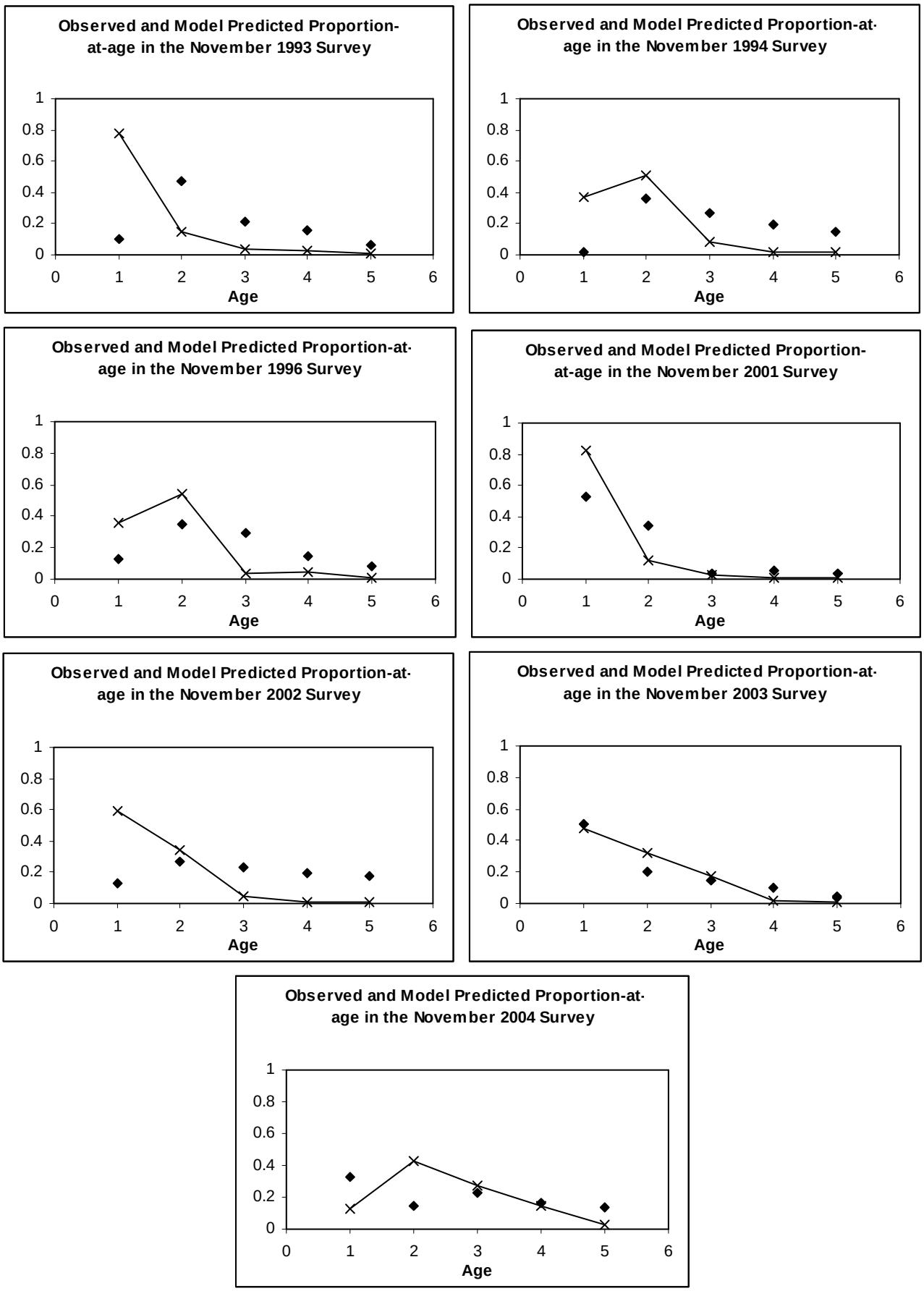

Figure 1. Observed (solid diamond) and model predicted (crosses with solid line) proportion-at-ages 1 to 5+ in the November Survey for selected years. Note that these data were not included in the likelihood.

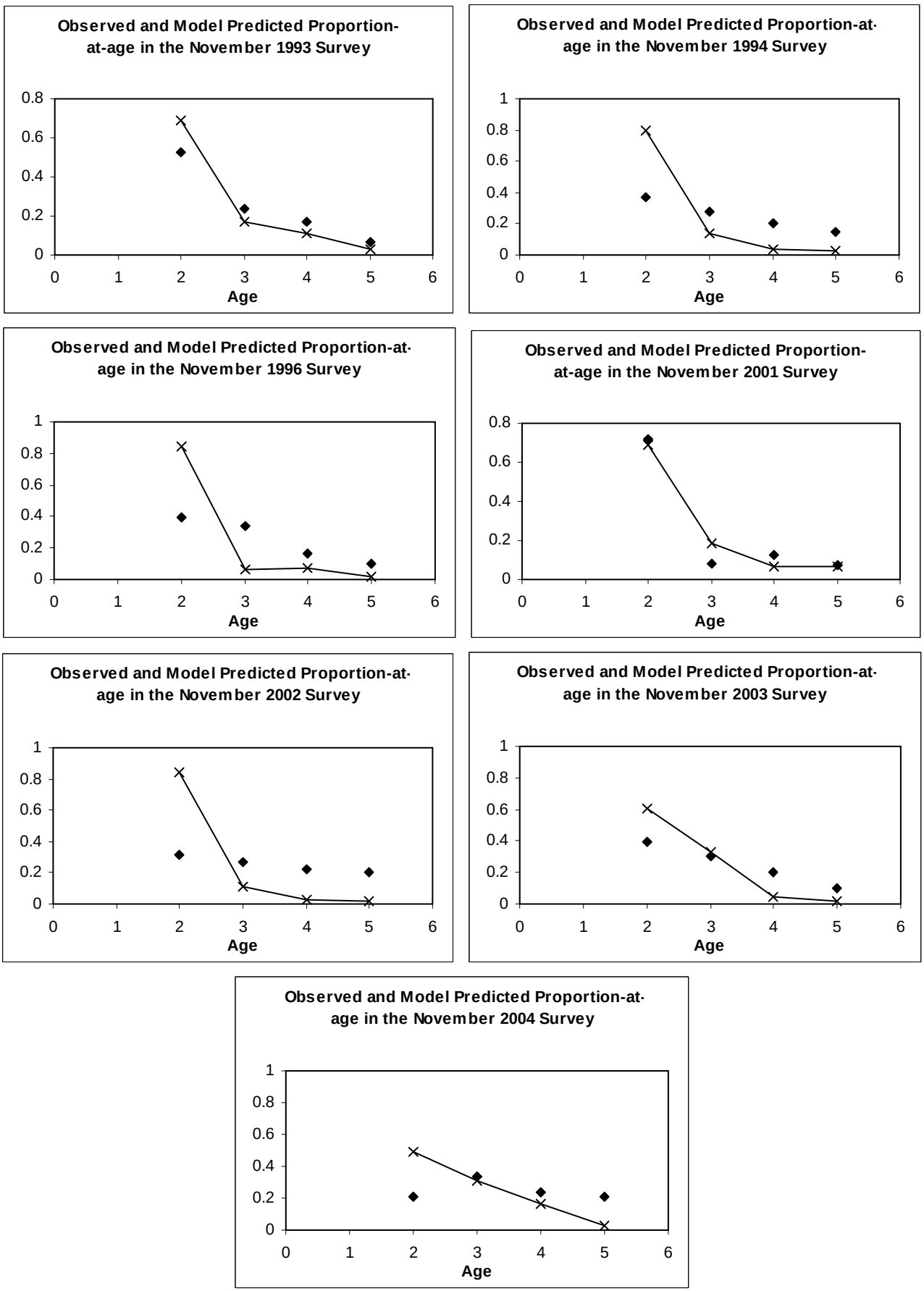

Figure 2. Observed (solid diamond) and model predicted (crosses with solid line) renormalized proportion-at-ages 2 to 5+ in the November Survey for selected years.

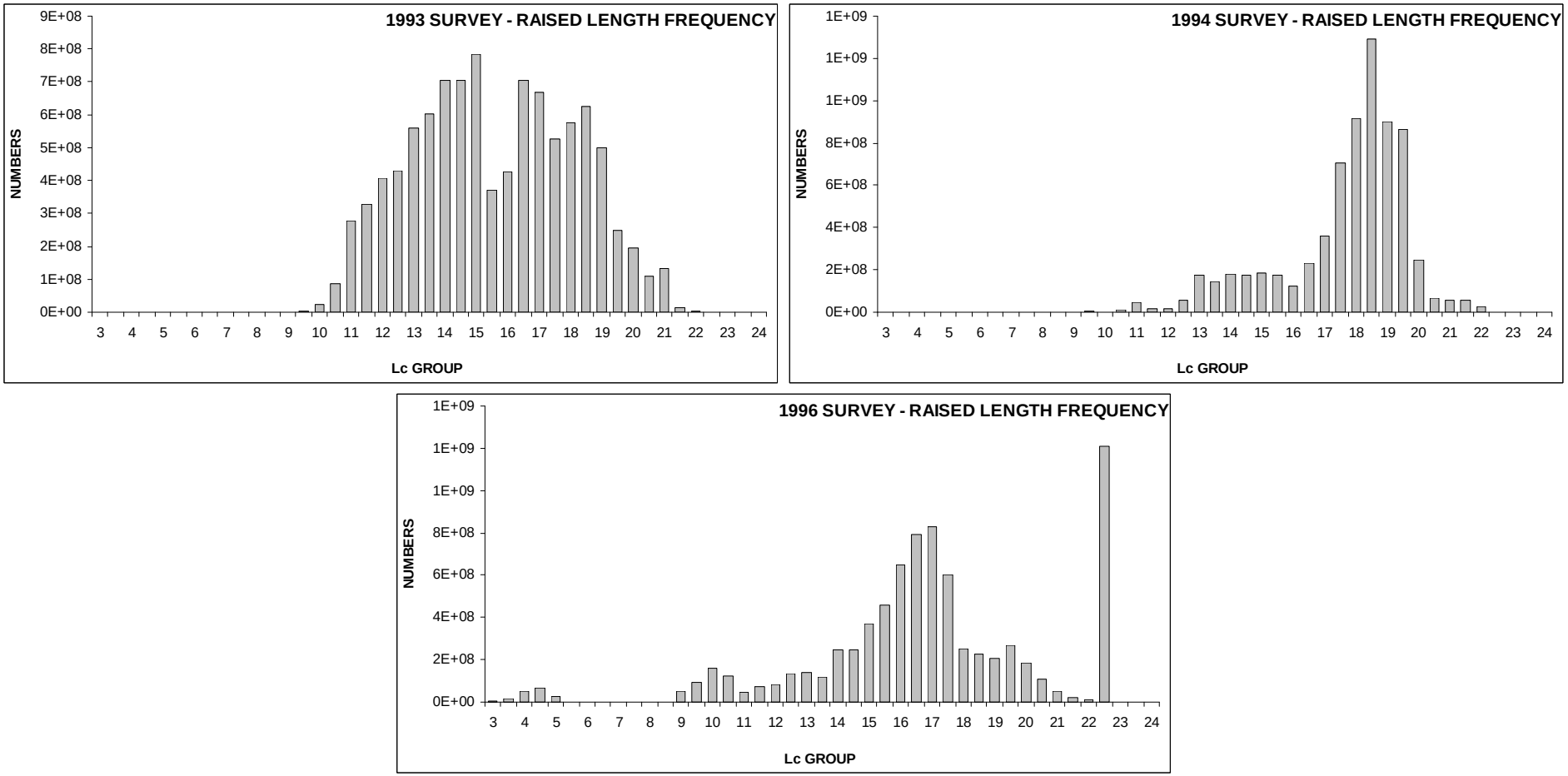

Figure 3. The raised length frequencies for the November surveys for which age length keys have been estimated by Deon Durholtz.

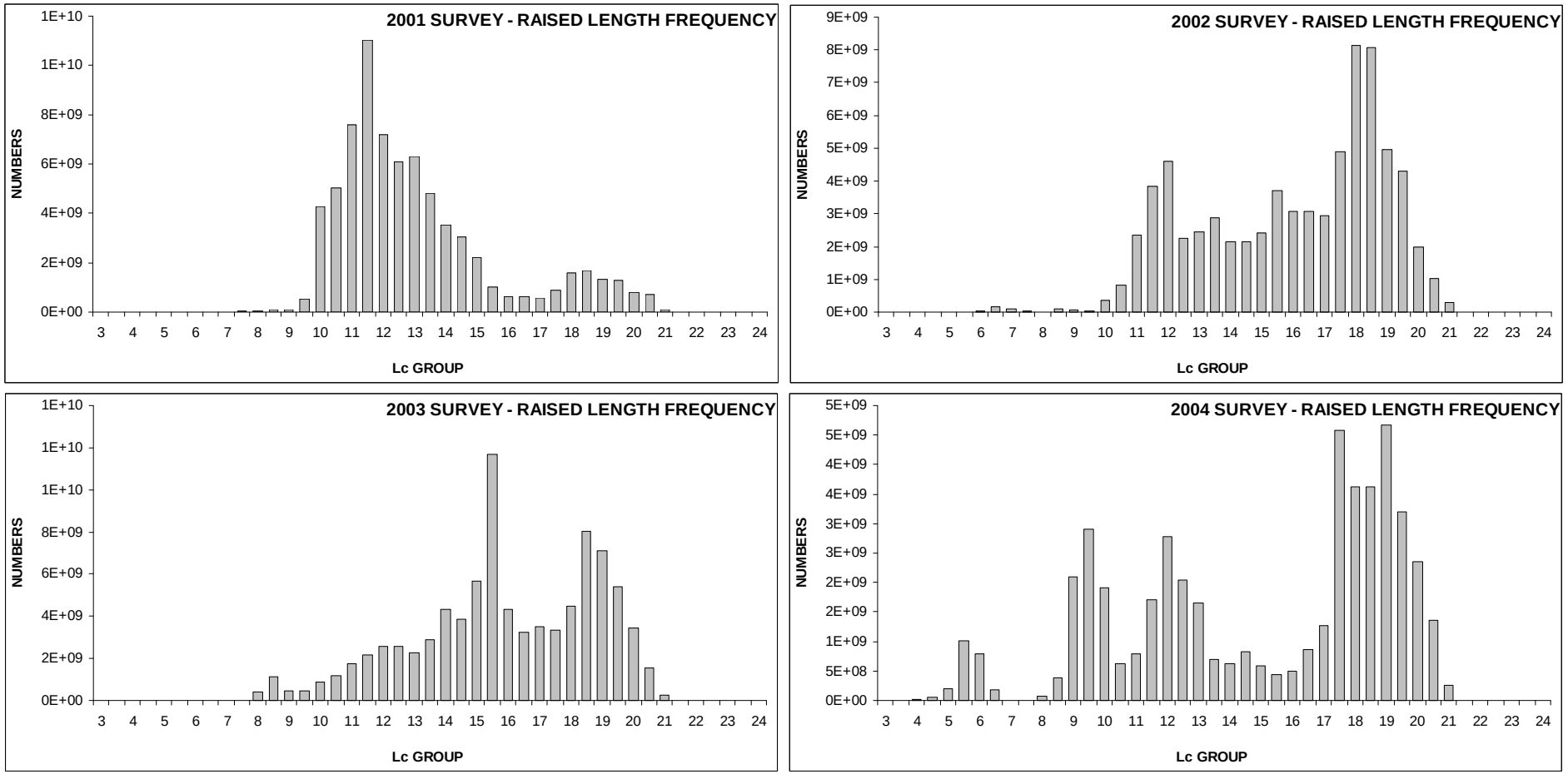

Figure 3 (continued). The raised length frequencies for the November surveys for which age length keys have been estimated by Deon Durholtz.