

### **Appendix C: Measurements of modern reference skeletons.**

This appendix provides the raw measurement data for all of the reference skeletons whose age was known or could be estimated by mandibular measurements that were used in this study. Although I have chosen to characterize the growth of fur seal skeletal elements using von Bertalanffy growth curves (see Chapters 2 and 3), there are many ways in which to characterize somatic growth (e.g., Schnute 1981). By providing access to the raw data, I encourage other researchers to utilize the data in whatever way they see fit. I will note, however, that transformations of the growth data are not likely to meet the assumptions of linear regression.

I also need to stress the fact that there are many potential sources of error in this dataset. These sources of error include, but are not limited to:

1. error in the age determinations
2. error in my measurements
3. variability in mean birthing dates
4. variability in individual growth rates.

I have discussed these problems at length in Chapters 2, 3, and 6. From those discussions, it would seem that number 4 may be particularly problematic. However, until larger series of measurements are made, it will be difficult to evaluate the full extent to which this will affect regression-based (either linear or non-linear) calibrations of age based on bone length.

It is my hope that by providing access to the raw measurement data used in this analysis, this will be the beginning stages of a long, productive history of data sharing

within the research community. To that end, electronic copies of these data are available either on compact disk (if the CD has been distributed with this copy of the dissertation), or by contacting the author.

#### Organization of the data

All of the data presented here are sorted by specimen number. The series of mandibles and bacula are largely independent of the other series of specimens, and have their own, unique sort order. In contrast, the remainder of the post-cranial elements all derive from the same pool of specimens. For that reason, the entire list of specimens used for the post-cranial measurements has been repeated, in the same order, for each of the post-cranial elements. This is true regardless of whether or not a particular specimen has measurements recorded for a particular element.

**ADDENDUM:** Hard copies of the data for Appendix C **have not** been included with this copy of the dissertation. If this copy of the dissertation has been supplied with a compact disk, all of the data files can be found there. All of the measurement files have been saved in two formats: as tab-delimited text files (\*.txt) and as Microsoft Excel files (\*.xls). Alternatively, the files can also be accessed on the internet at:

<http://www.pinniped.net/etnier/dissertation>

In order to ensure that all of the data entries fall under the correct column headings, it is strongly recommended that you only try to access these data files using spreadsheet software such as Microsoft Excel, Microsoft Access, or Quattro Pro. Although word processing programs should open the files reliably, it will be difficult to parse the data into the correct columns.

Any corrections or additions to the database are welcomed. My contact information will be posted at:

<http://www.pinniped.net/etnier>

and will be updated as necessary.