

Shaffer *et al.* 2006). Archival tags have provided tracks covering up to 3.6 years (Block *et al.* 2001).

Movement patterns can be derived with archival tags by examining changes in light level to establish local apparent noon. In turn, longitude and day length can be estimated from time of sunrise and sunset to determine latitude (Ekstrom 2004). These locations can be further corrected using sea surface tempera-

tures (SST; Teo *et al.* 2004; Shaffer *et al.* 2006). Salmon researchers have also been using depth and temperature archival tags to discern more about the behaviour and movement of salmonids in relationship to their environment. The data intensity of these devices allows studies of both fine- and large-scale behavioural patterns, migratory routes, and physiology, all in relation to the environment (Boehlert 1997).

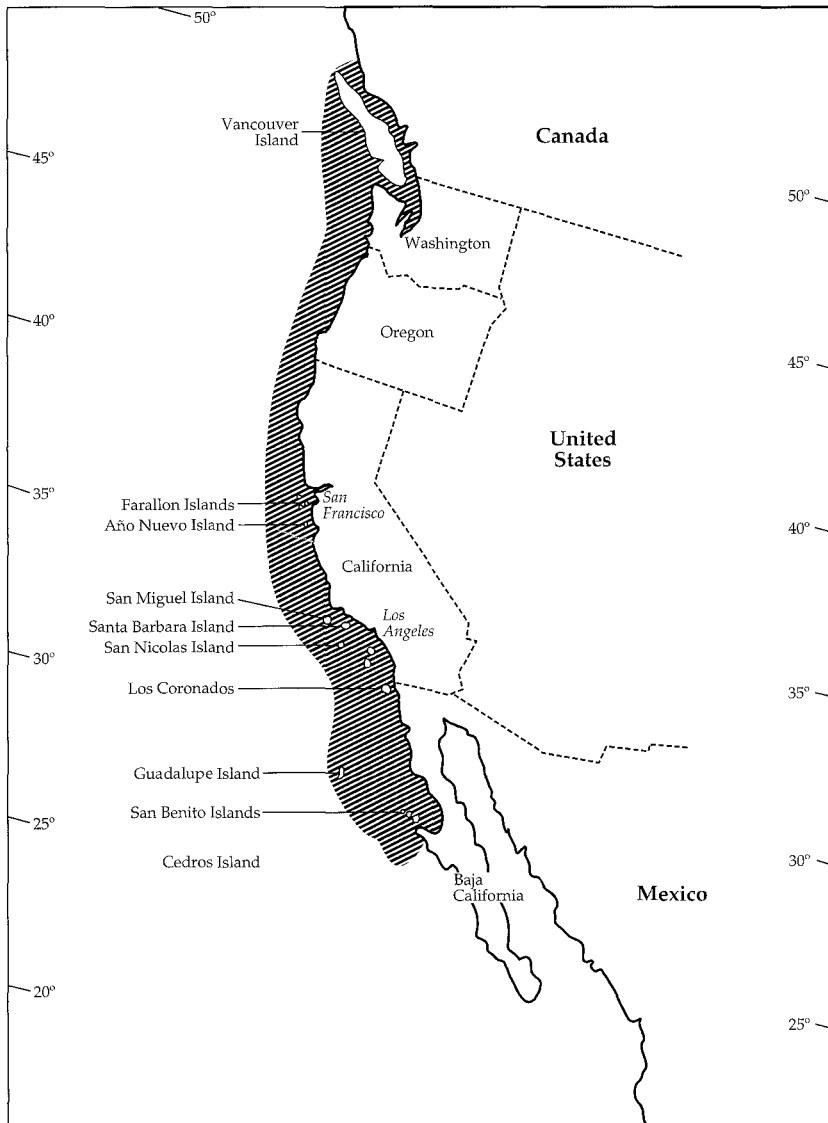


Figure 6.1 (a) Distribution of northern elephant seals as determined using boat and plane based surveys. (continues). Reproduced with permission of Ecological Society of America, from Foraging ecology of northern elephant seals, Le Boeuf, B. J., Crocker, D. E., Costa, D. P., *et al.* Ecological Monographs, **70**, 2000; permission conveyed through Copyright Clearance Center, Inc.).