

## NOTE

### CORRECTION TO "MAXIMUM LIKELIHOOD ESTIMATION IN THE BIRTH-AND-DEATH PROCESS"

BY NIELS KEIDING  
*University of Copenhagen*

Mr. O. Brian Allen has pointed out that in the supercritical case  $\lambda > \mu$  the conditional distribution of  $W$  given  $W > 0$  is exponential with mean  $\lambda/(\lambda - \mu)$  when there is one ancestor ( $x_0 = 1$ ) and is not gamma (such as stated in the paper, *Ann. Statist.* 3 363–372) when  $x_0 > 1$ .

This corrects erroneous statements on page 366 (line 12 from above and line 3 from below). The distribution of  $W$  when  $x_0 > 1$  is the convolution of  $x_0$  i.i.d.  $W$ 's corresponding to one ancestor, and no simple expression exists for the conditional distribution given  $W > 0$ .

It is further implied that the statement about limiting distribution on top of page 368 is incorrect (though in this case  $x_0 = 1$  only by a scale factor). The first remark on page 368 is still true, however.

Finally, in the proof of Theorem 6.1, the last argument on page 369 is incomplete. An amended proof is, however, a direct corollary of the results of Keiding and Lauritzen (1978).

#### REFERENCE

KEIDING, N. and LAURITZEN, S. (1978). Marginal maximum likelihood estimates and estimation of the offspring mean in a branching process. *To appear in Scand. J. Statist.* 5.

INSTITUTE OF MATHEMATICAL STATISTICS  
UNIVERSITY OF COPENHAGEN  
5 UNIVERSITETSPARKEN  
DK-2100 COPENHAGEN Ø  
DENMARK