

Figure 1. Statistical power of different capture-recapture surveys to detect a change in survival rates in open-nesting monitoring applied on long-lived species according to different components of a) short- and b) long-duration surveys. The first horizontal dimension (lower x-axis) indicates the number of breeding pairs surveyed. The second horizontal dimension (upper x-axis) indicates the proportion of ringed fledglings. Filled symbols represent CR surveys in which five breeders are captured during the five first years in addition to the standard survey (open symbols).

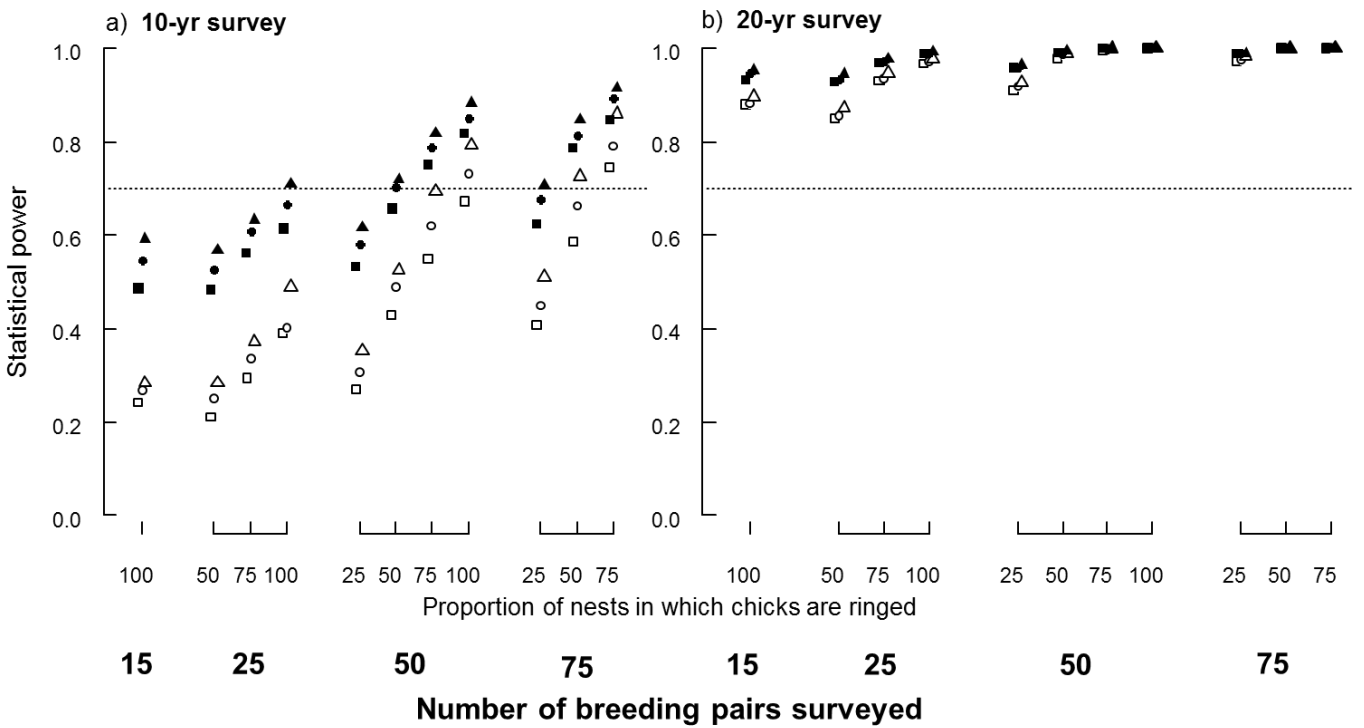


Figure 2. Statistical power of different capture-recapture surveys to detect a change in survival rates in nest-box monitoring applied on medium-lived species according to different components of CR surveys. The first horizontal dimension (lower x-axis) indicates the number of breeding pairs surveyed. The second horizontal dimension (upper x-axis) indicates the proportion of ringed fledglings. The upper (a,b) and lower (c,d) panels respectively show results with and without random temporal variation around mean survival rates.

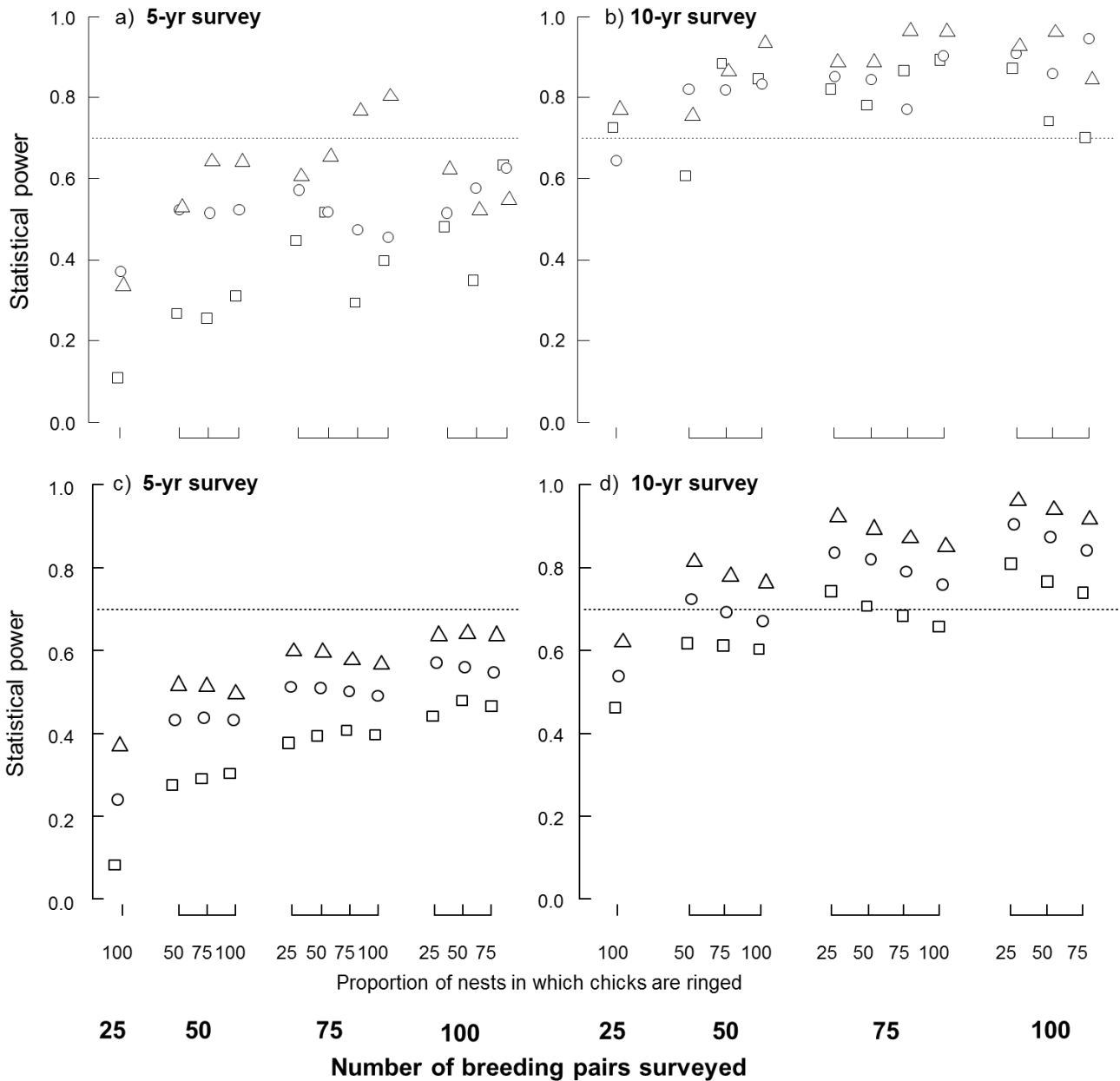


Figure 3. Total cost in working-days of capture-recapture surveys for ON monitoring on a) long-lived species and b) NB monitoring on medium-lived life-history strategies according to effort dedicated to different survey components. Only short survey durations are shown here (see Fig. S5 for long duration). The first horizontal dimension (lower x-axis) indicates the number of breeding pairs surveyed (component 2 in Fig. S2). The second horizontal dimension (upper x-axis) indicates the proportion of ringed fledglings (component 3 in Fig. S2). In a) filled symbols represent CR surveys in which five breeders are captured during the five first years in addition to the standard survey (open symbols). This component is absent of the design for b) medium-lived species (grey symbols). The last component, the recapture/resighting probability of breeders, is shown by squares (50% of breeders recaptured/resighted), circles (65%) and triangles (80%).

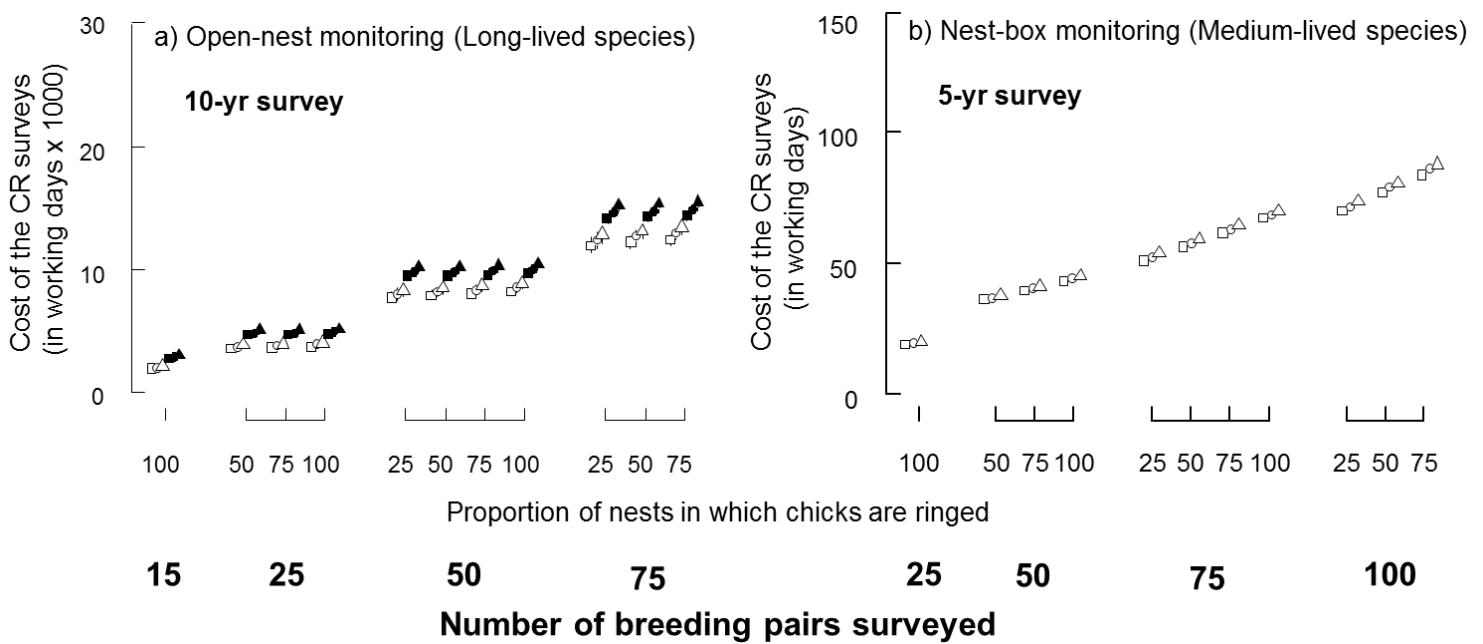


Figure 4. Relative contribution to the increase in statistical power (a,d) and cost (b,e), and cost-effective contribution (c,f) of different components of capture-recapture design (proportion of chicks ringed [%chick.ringed], capture of breeding birds for ON monitoring only [Capt.Breeders], effort dedicated to resighting [Resigh.effort] or recapture [Recapt.effort] respectively for ON and NB monitoring). The survey reference was the short-duration one (5 years for NB, 10 years for ON) and 50 and 75 surveyed pairs, respectively for ON and NB.

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