The following supplement accompanies the article

Life-history and activity shape catchability in a sedentary fish

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Supplement 1. Additional data

Estimation of home ranges using the Kernel utilization distribution

First, we estimated the centers of activity (COA) for each fish at each time bin (Hedger et al. 2008, Simpfendorfer et al. 2008) using the Nadaraya–Watson normal kernel estimator with the sm package (Bowman & Azzalini 1997). The resulting set of estimated positions was used as input for the subsequent analysis. Fish position at each time, XYij, was based on the averaged positions of the receivers that detected fish *i* during the time bin *j* and weighted by the number of detections at each receiver over that period. Selection of an appropriate time-bin size (Δt) is required to obtain accurate results when using this method, and the optimal bin size must balance the need to record sufficient detections from different receivers and the need to not allow the fish to move too much (Simpfendorfer et al. 2002). To select the optimal Δt, we calculated the mean number of receivers detecting signals from an individual tag (NR), and then, we averaged the number of detections from this tag across all receivers (ND) during each time bin. The resulting value was Δt = 30 min (Villegas-Ríos et al. 2013b). Bivariate normal fixed kernel utilization distributions (KUDs) were estimated based on 95% (home range) of the positions (KUD_{95}) using the adehabitat package (Calenge 2006). A kernel bandwidth equal to the error in the estimation of the fish locations was selected. As this error is unknown, it was approximated as the mean of the positioning error of the control tag (45 m). More details are provided by Villegas-Ríos et al. (2013b).

Fig. S1. Raw data of (a) sea surface temperature for the period 2008-2012, (b) gonadosomatic index (GSI) for the period 2009-2011, (c) feeding index for the year 2011 and (d) catch per unit effort (CPUE) for the period 1999-2012.

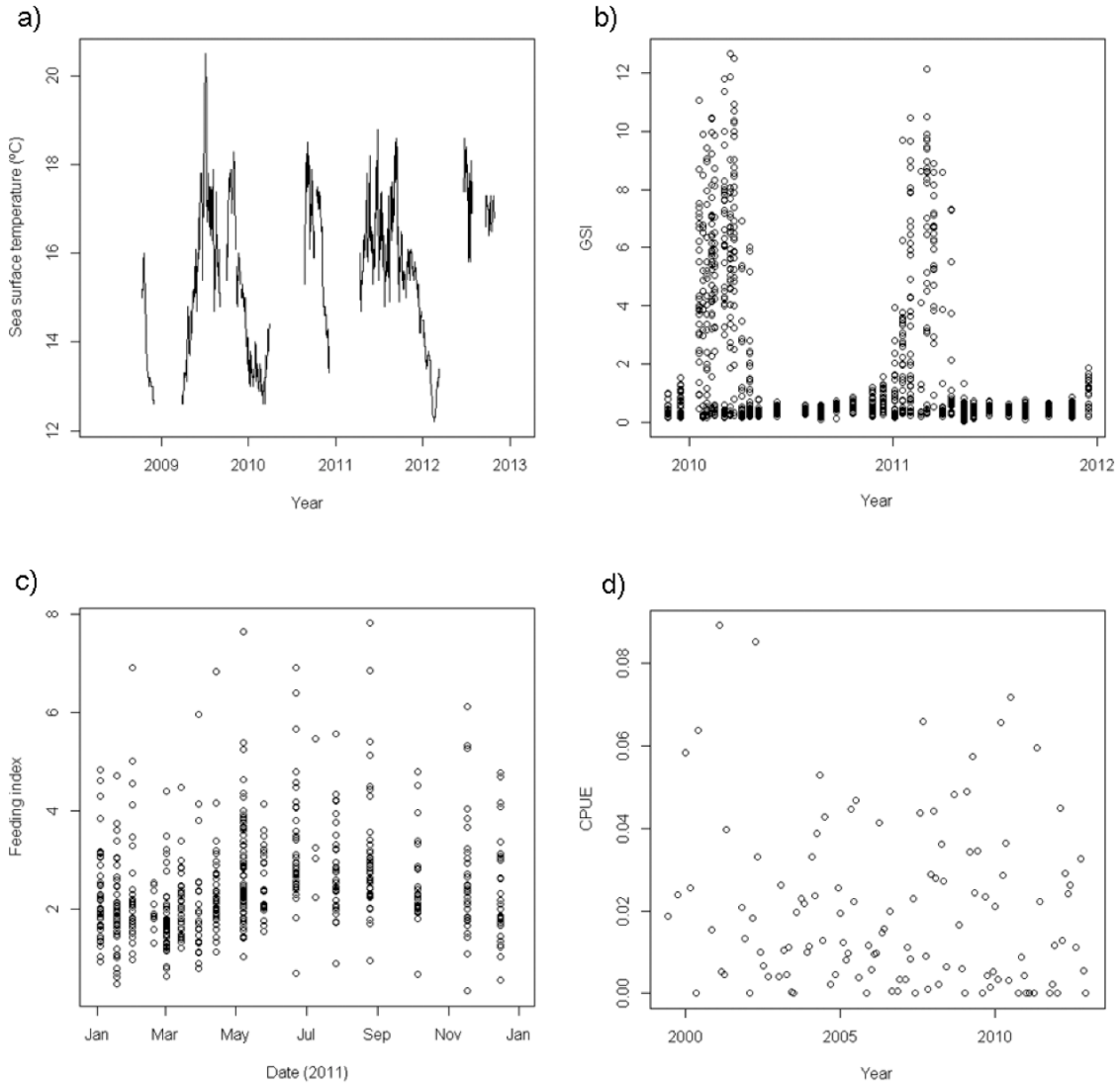

Fig. S2. Monthly mean values of catch per unit effort (CPUE) for the study period (1999-2012).