

PRODUCTION AND COMPOSITION OF SMALL-SCALE FISHERIES LANDINGS IN THE EASTERN AEGEAN SEA

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Abstract:

The biomass and species composition of the landings from 7 coastal small scale fisheries vessels were compared over a 5 month period in SW Samos, eastern Aegean Sea. The quantitative composition of the landings was assessed for the different metiers: trammel net, small gillnet, long line, boat seine and a locally practiced metier, "kalami". The total landing weight of this fleet between June and October was 14.3 tons, dominated by the catches of the small gill net métier (52.7%).

Introduction

Monitoring of small-scale fisheries can be problematic, due to their wide distribution across the 18,000 km coastline of Greece. Little quantitative information is available on various aspects of Greek small-scale fisheries, and a large part of the catch reaches the local market unreported, especially in non-central regions. However small scale fisheries contribute significantly in terms of weight and value to the total Greek fisheries and are of primary socio-economical importance [1,2]. The species composition of small-scale fisheries have only been studied in a few regions of the Greek seas [1,3,4,5,6,], and have illustrated variation in dominant species caught in the different regions and with different metiers. In this work the quantitative composition of the landings of a small scale fishing fleet in Ormos port, Marathokampos Bay, SW Samos has been examined.

Materials and Methods

The fleet of Ormos port is composed from 7 active small-scale fisheries vessels. This fleet utilizes several metiers, according to the season and the yield of the landings and comprises mainly of trammel nets (mesh size 22-36mm), gill nets (8-9mm), long lines (hook N° 9-14) and boat seines. One boat practiced an unusual local metier named "kalami" (September, October), comprising of an adapted fishing rod targeting *Dentex gibbosus* at 50-150 m depth. The landings of this fleet were recorded on a daily basis from June to October 2009. Recording took place on the port immediately after the arrival of the vessels. The number of individuals and the weight per species were recorded. Information about the used gear, the mesh size or the size of the hooks, the length of the nets or the number of the hooks were collected.

Results and Discussion

The total fishing effort of the fleet during the 5 months of the survey period was 544 days at sea; 56.3% of the time was with trammel nets, 16.5% with 8-9mm gillnets, 14.5% with longline, 7.2% with boat seine and 5.5% with "kalami".

Most prevailing species in June were *Scorpaena scrofa* (15%), *Palinurus elephas* (14%), *Oblada melanura* (8%) and *Mullus surmuletus* (8%). In July and August, landings were dominated by *Boops boops* (64% in July, 79% in August) and *Atherina boyeri* (7% in July, 9% in August). This was due to the use of 8mm gill net metier in those two months. In September, the main species were *D. gibbosus* (26%) and *B. boops* (21%). In October, the season for boat seines begun and the main landings were *B. boops* (17%) and *Pagrus pagrus* (7%).

The total landings of the trammel net 30-36mm metier were 2039 Kg. The main target species in this metier is *S. scrofa* (20%), *P. elephas* (13%), *P. pagrus* (8%) and *Dentex dentex* (6%). Other fish species accounted for the remainder of 53% of the landed biomass in this metier (fig.1, A). The 22-24 mm trammel net had total landing weight of 922 Kg, with main target species being *M. surmuletus*, comprising 25.7% of the total landing. The seasonal landings of *Scomber japonicus* and *Coryphaena hippurus* accounted for another 35.9%, whereas other fish species accounted for 38.4% (fig.1, B). The total landing weight in the longlines metier was 1033 Kg, with the main species being *P. pagrus* (32%), *Spondyliosoma cantharus* (26%), *Diplodus vulgaris* (15%) and *D. dentex* (4%) (fig.1, C). The landings of the boat seine comprised mostly of juvenile fish of various species. The species composition was mainly juvenile *B. boops*, *A. boyeri* and *Sardina pilchardus*, which together accounted for 41.7% of the landed weight (fig.1, D). The landings from the 'kalami' metier were 474Kg, targeting solely *D. gibbosus*. Further research needs to be carried out to improve the understanding of this locally practiced, high yielding technique. The 8-9 mm gillnet metier accounted for the majority of the total landings (52.7%), by number as well as by weight. This has been reported to be exceptionally high this year yielding a total landing of 7.54 tons from 90 fishing days. The catch was dominated by *B. boops* (84%) and *A. boyeri* (10.2%). Other species such as *Sarpa salpa* and *S. pilchardus* were also present but accounted for <1% of the total landings weight.

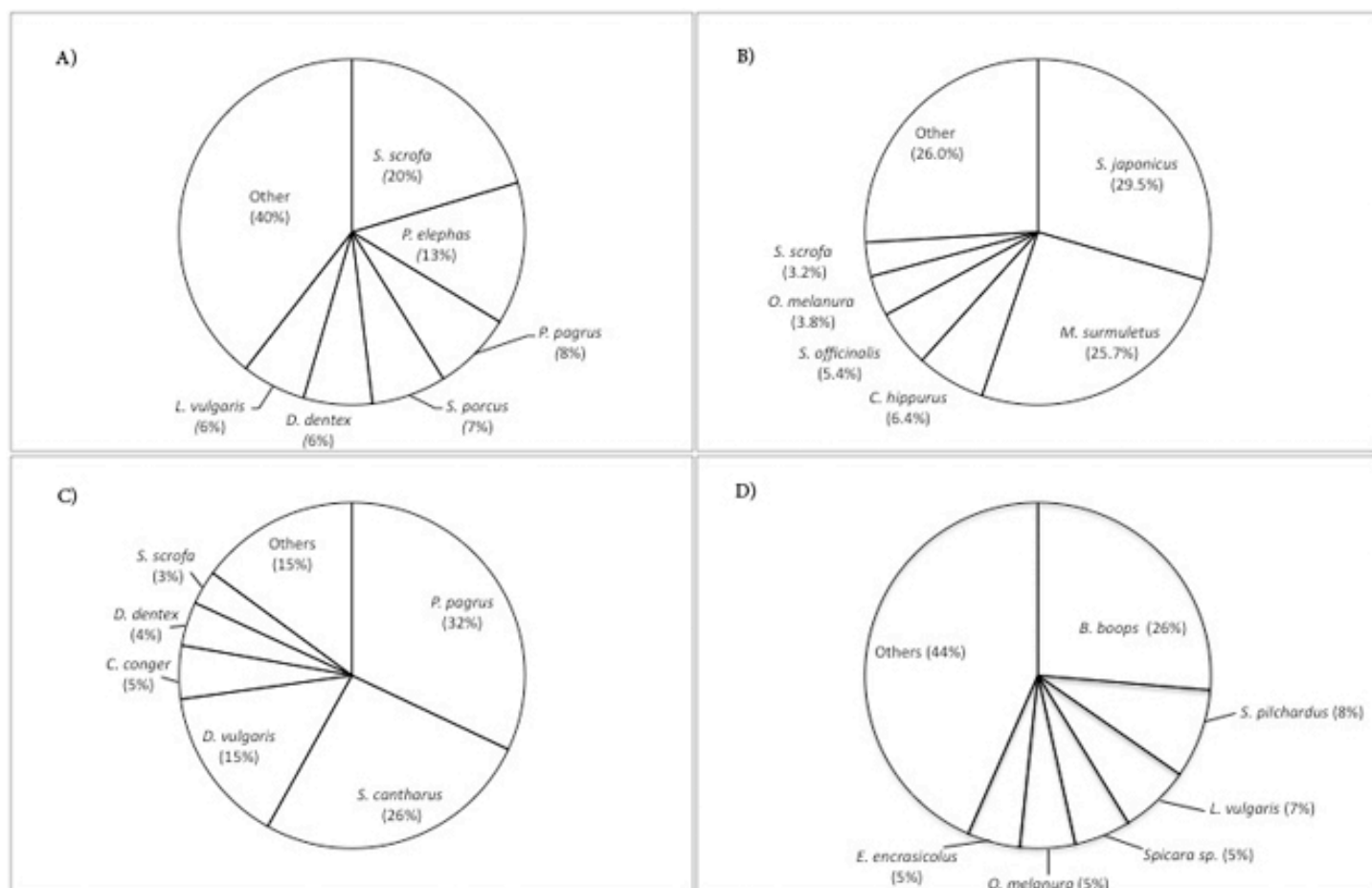


Figure 1: Catch composition in small scale fisheries metiers in Marathokampos Bay: A) Trammel net, 30-36 mm (06-09/2009), B) Trammel net, 22-24 mm (07-10/2009), C) Long Lines, hook No 9– 14 (08-10/2009) and D) Boat seine (10/2009)

The 30-36mm trammel nets target *Scorpaena sp.* and *P. elephas*, but this type of net also caught *P. pagrus*, *Phycis sp.* and *D. dentex*. These are target species of the longline métier, indicating some degree of gear competition. Landings of the 22-24mm trammel net métier show some similarity to the landings reported from the South Euboikos Gulf [4] and the region of Kastellorizo [5] in respect to the common main target species of *M.surmuletus* and *P. arcane*. However, much fewer *M.babartus*, *Spicara maena* and *B.boops* were caught in this métier in Marathokampos Bay. In conclusion, for a greater understanding of the catch composition of small scale fisheries in the Greek seas, further long term research is necessary, covering a wider region and over different seasons. This knowledge is a prerequisite for the development of sustainable fisheries management for multispecies and multi-gear Greek small-scale fisheries.

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