Some Scientific Information of Tunas Harvested by Thai Purse Seiners

By
Reangchai Sujittosakul
Department of Fisheries

Introduction

Thailand is well-known on top of the leading countries of canned tuna production and export for longs. However, the development of oceanic tuna fishery of Thailand went on very slowly.This is due to the major problems those are lacks of knowledge, experience and reliability in the outcomes/cost-benefit. It was just recently in late of 2005 that a long distant fleet of Thailand for oceanic tuna fishing was established by private sector.It is a fleet of tuna purse seiners currently operating in the Indian Ocean. This report describes briefly what have been figured out after the operation of this Thai fishing fleet. The main content is concerned with Thai tuna purse seine fleet, tuna production, catch per unit of effort, catch composition and length frequency distribution of the captured tunas.

Thai Tuna Purse Seine Fleet

At present there are 6 tuna purse seiners operating under Thai flag in the Indian Ocean. These vessels having sizes between 1400-2700 gross tonnage are owned by 3 Thai fishing companies namely Thai Deep Sea Fishing Company Ltd., Thai Tuna Fishing Company Ltd.and Siam Deep Sea Fishing Company Ltd., with 2 of each. They have been authorized for tuna fishing in the IOTC areas since September 2005. The operating areas ranged from lattitude $10^0$58.5'N-$8^0$22.4'S and longitude $42^0$28'E-$85^0$36.3'E. Tunas caught by this fleet were carried back to Thailand to support the cannery industry.

Tuna Production

Figure 1 illustrates the yearly tuna production achieved by Thai purse seiners in the Indian Ocean during 2000-2006. Before the commencement of the current fleet in 2005 the total catches annually were lower than 2,000 tonnes. After the exertion of 6 Thai tuna purse seiners the production rose sharply to12.216.63 tonnes in 2005 and increased almost double fold in the following year. The monthly change of catch volume in the year 2006 is shown in figure 2. It appeared that the season of high catches was observed during February – May in which the highest volume was in March. Another peak of high catch occurred once more in October but smaller than the first one. The 2 remakable lowest catches in year round fell in January and July.

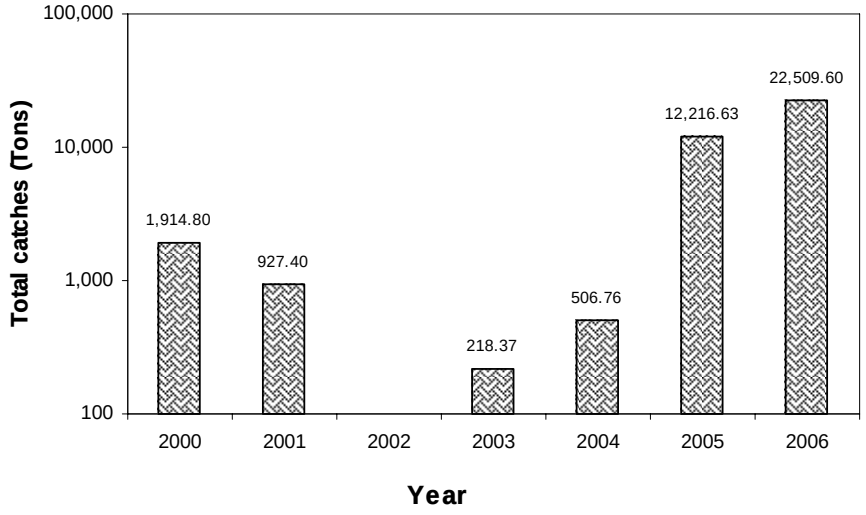

Figure 1 Yearly tuna production by Thai purse seiners during 2000-2006

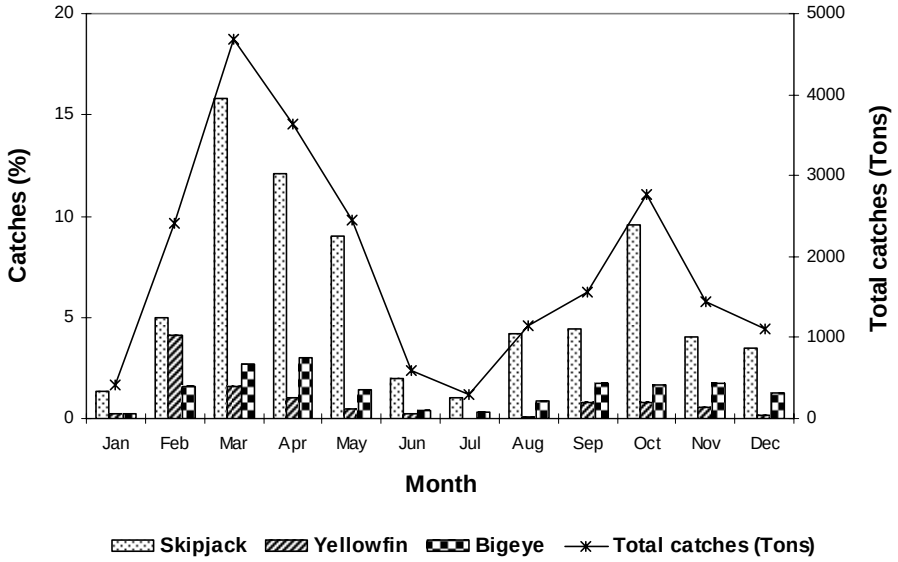

Figure 2 Monthly change of catch volume and catch composition in 2006

Catch per Unit of Effort

Figure 3 demonstrates the monthly change of CPUE(tonnes/day) in the year 2006. The monthly CPUEs ranged from approximatly 15-55 tonnes/day.The trend of variation was similar to that of the monthly change of catch volume.The high CPUE duration was also during February – May as well as another peak in October. The difference was only that the lowest CPUE was observed in November.

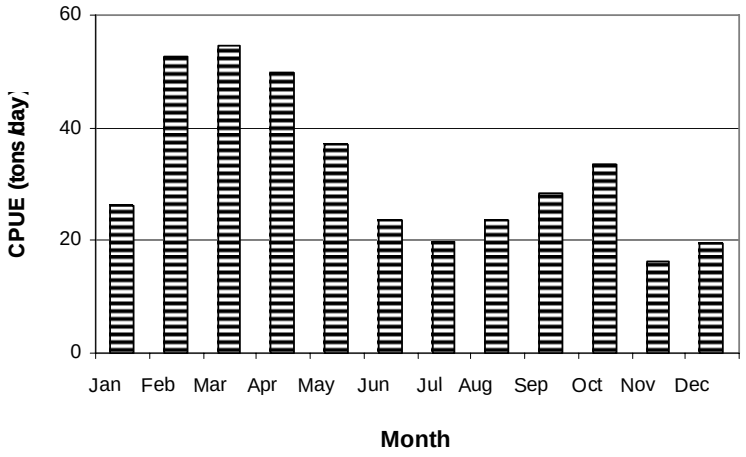

Figure 3 Monthly change of CPUE in 2006

Catch Composition

Figure 4 shows the catch composition of oceanic tunas caught by Thai purse seine fleet in 2006. The dominant species was skipjack which contributed 71.98% to the total production, followed by bigeye 17.02%, yellowfin 10.06% and the the rest 0.94% belonging to bonito.The monthly change of catch composition was also present in figure 2.

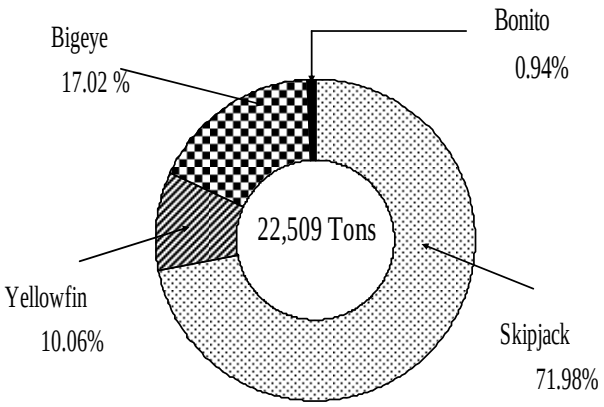

Figure 4 Catch composition of oceanic tunas caught by Thai purse seiners in 2006

Length Frequency Distribution

The observed sizes of skipjack, bigeye and yellowfin in 2006 were 41-76 cm., 41-133 cm. and 33-152 cm. respectively, and with mean length 67.5, 77.5 and 61.5 cm. respectively.The length frequency distributions, quarterly, of these species are illustrated in figure 5,6 and 7.

Development plan for Thai tuna fishing fleet

1. 15 tuna purse seiners during 2005-2010 by purchasing/building 5 vessels in every 2 years (2005-2006,2007-2008 and 2009-2010)
2. 5 tuna longliners during 2005-2007

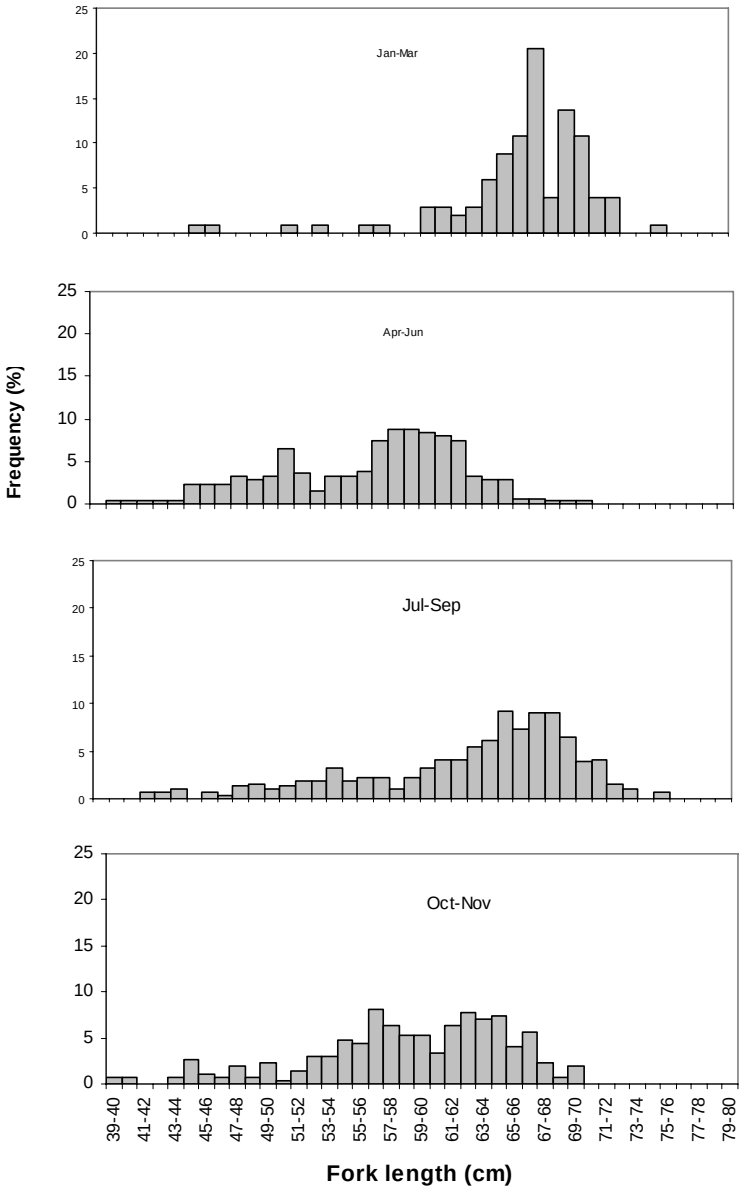

Figure 5 Length frequency distribution of skipjack during January-December 2006

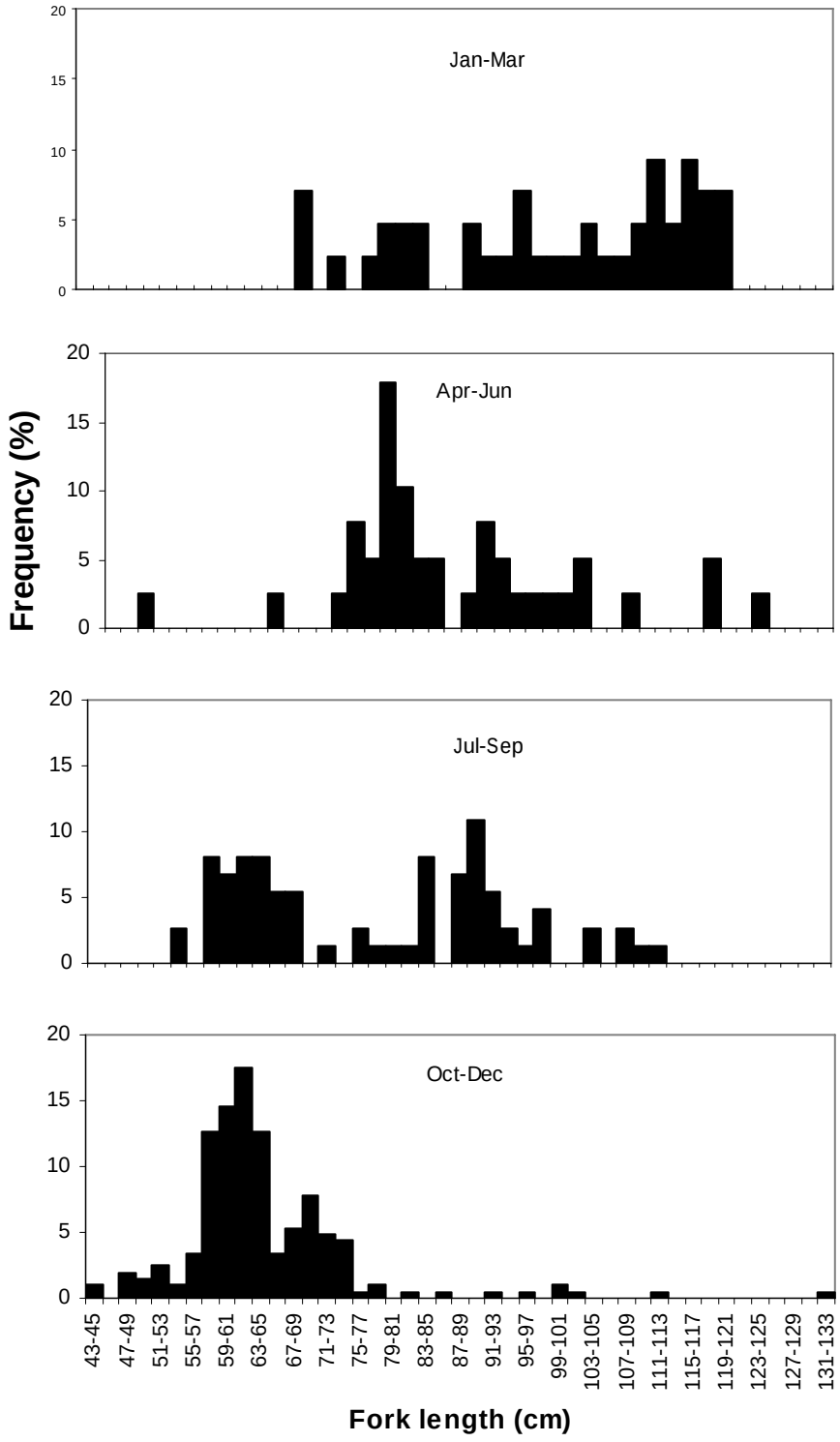

Figure 6 Length frequency distribution of bigeye during January-December 2006

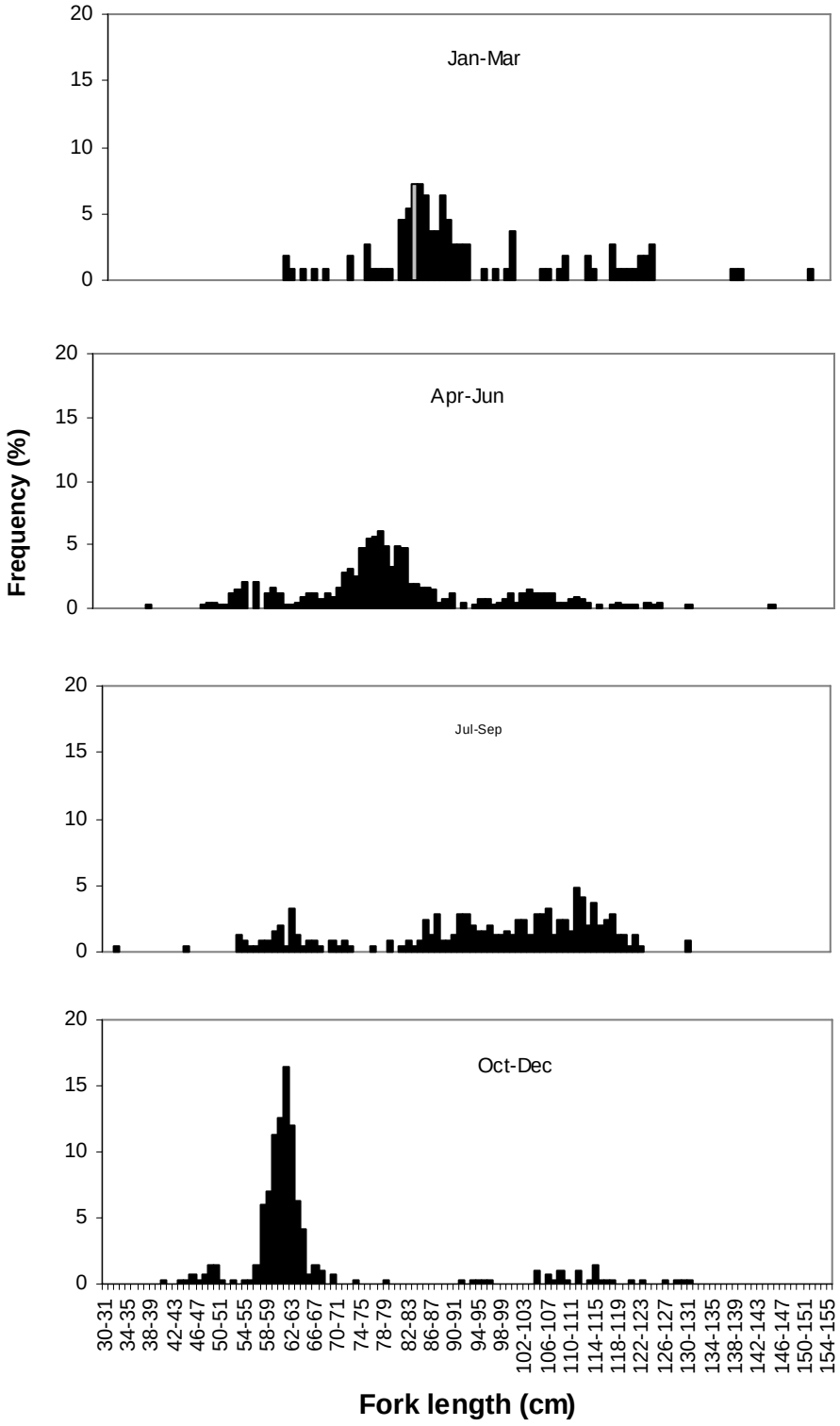

Figure 7 Length frequency distribution of yellowfin during January-December 2006