



## How to Get There

Daily morning service flight from Kota Kinabalu to Pulau Layang Layang through Layang Layang Island Resort (LLIR) operates a daily air shuttle service for tourist, staff and etc. It takes an hour to reach its destination. In order to serve the tourism industry, a resort with 86 rooms and conference facilities has been developed and managed by LLIR. All rooms are air-conditioned and equipped with basic facilities. It opens for business from February till September every year, and closes during monsoon season. The peak season for diving is between March and May and again in August. Divers must produce a diving certificate from recognized bodies.

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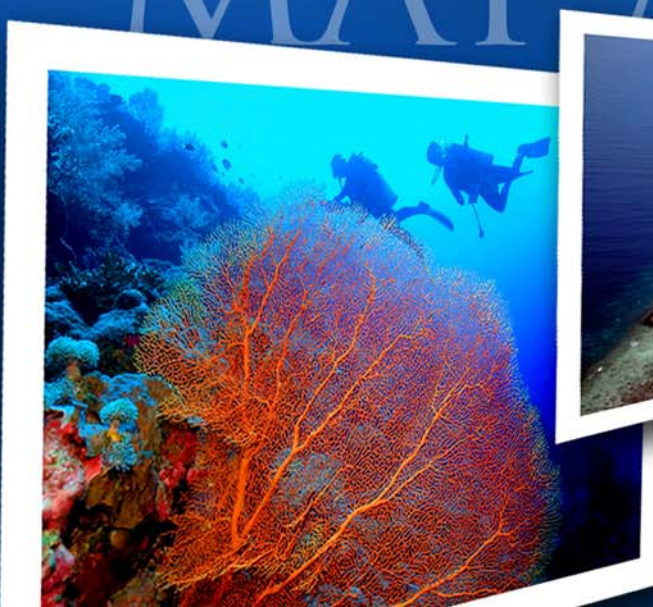


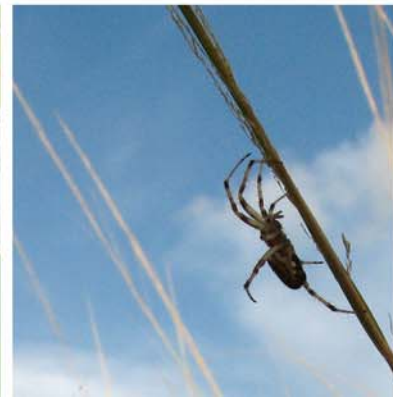
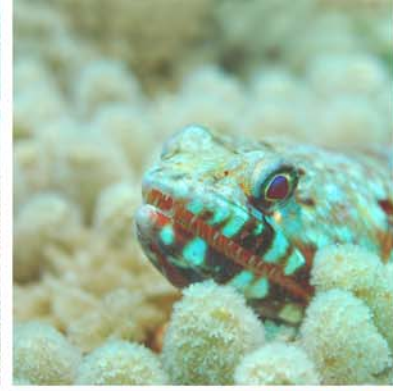
Pulau Layang Layang, MALAYSIA

# CALENDAR of EVENTS 2006



MARCH  
APRIL JUNE JULY  
MAY AUGUST  
SEPTEMBER  
OCTOBER  
NOVEMBER  
DECEMBER







# CHARTER FLIGHT SCHEDULE



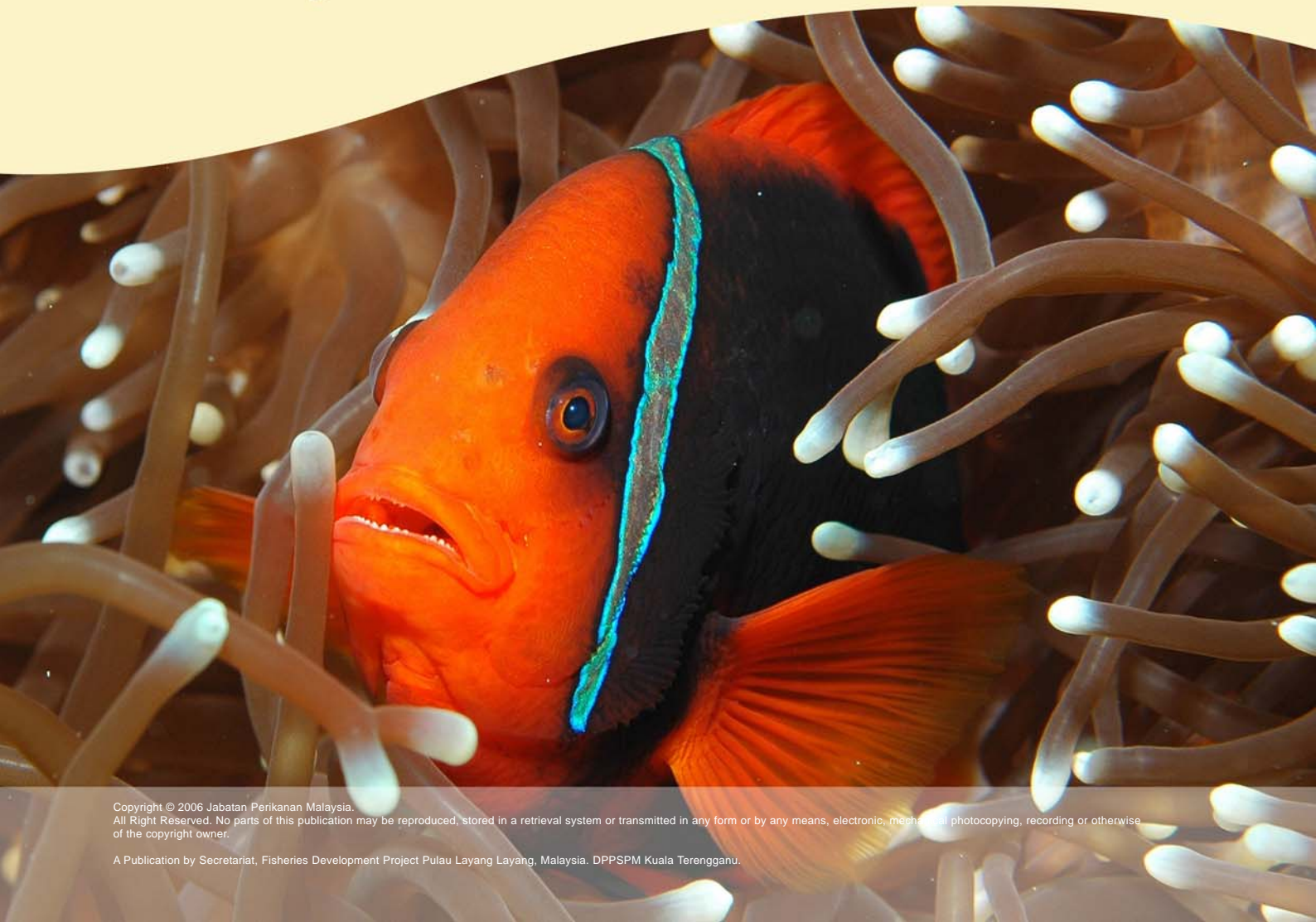
## Charter Flight Schedule

Nos. of Flight 2006	From Kota Kinabalu				
	Programme	IN		OUT	
		Date	Time	Date	Time
To PULAU LAYANG LAYANG					
1+ Night-Stop	Nursery cage	11 Mac	0730	12 Mac	1200
1+	Netloft	14 Mac	0730	15 Mac	1200
1	Sec. Tech. visit - KSU	28 Mac	0730	1 Apr	1200
1+ Night-Stop	Tech. visit KSU	30 Mac	0730	31 Mac	1200
1	Sec. Tech. visit - ICU	15 Mac	0730	Fly-out Empty	
1	Contract Staff S1	1 Apr	0730	1 Apr	1200
1+ Night-Stop	Fish Farming Boat	2 Apr	0730	3 Apr	1200
1	DoF-USM	8 Apr	0730	Fly-out Empty	
1	Contract Staff S2	15 Apr	0730	15 Apr	1200
1	DoF-USM	Fly-in Empty		25 Apr	1200
1	Contract Staff S3	1 May	0730	1 May	1200
1	Contract Staff S4	15 May	0730	15 May	1200
1+ Night-Stop	Work boat	21 May	0730	22 May	1200
1	Contract Staff S5	15 Jun	0730	15 Jun	1200
1	Contract Staff S6	1 Jul	0730	1 Jul	1200
1	Contract Staff S7	15 Jul	0730	15 Jul	1200
1+ Night-Stop	Tech. visit SEAFDEC	17 Jul	0730	18 Jul	1200
1	Contract Staff S8	1 Aug	0730	1 Aug	1200
1	Contract Staff S9	15 Aug	0730	15 Aug	1200
1	Contract Staff S10	1 Sep	0730	1 Sep	1200
1	Contract Staff S11	15 Sep	0730	15 Sep	1200
1	Contract Staff S11	Fly-in Empty		1 OK	1200
2 Extra					
24 Flights					
2	Medevac Flight				

Nos. of Flight 2006	From Labuan CN135 TUDM				
	Programme	IN		OUT	
		Date	Time	Date	Time
To PULAU LAYANG LAYANG					
1	Tech. visit ICU	17 April	0730	18 April	0900
	Sec. Tech. visit - KSU			18 April	0900
Handing over		Technical Visit		Contract Staffs Shift - IN	
Medevac Flight				Contract Staffs Shift - OUT	

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## **Installation of NURSERY CAGE**

The cage will be used in Pulau Layang Layang to nurse, sort and grade groupers, napolean wrasse and tuna before being transferred to the semi submersible cage for fattening. The cages were designed and fabricated locally and delivered to Pulau Layang Layang on **6 March 2006** for installation and expected to be completion by **15 March 2006**.

# FACILITIES

## AT PULAU LAYANG LAYANG







## **SEED** transportation

Transportation of seeds is a specialized operation which requires customised design of transport tanks equipped with an aeration system. Transportation of seeds is a critical process in farming practices since the survival of fingerlings after shipment depends on methods of handling. Incorrect methods of handling may contribute to mortality due to the excessive stress condition during transport. Stock of seeds above 100 gm will be shipped to Pulau Layang Layang for farming trials in nursery cages before the real culture operation in the semi submersible cages takes place.



## Handing over of **NETLOFT**

Netloft is one of the supporting infrastructures built to support the aquaculture operation. The construction started on November 2005 and was scheduled to be completed by April 2006. The completion of the net loft is ahead of schedule. The handing over of the netloft by JKR to ICU-JPM and finally to DoF will be witnessed from **14-15 March 2006**. The netloft will facilitate the maintenance of netting and storage works when aquaculture project is in full operation.



## Supply, installation and maintenance of **PAYAOS**

Payao is one of the types of Fish Aggregating Devices (FADs) deployed during tuna catching operation by the purse seiners. The main components of a payao are floats, ropes, and sinkers. Materials used for the floats also varies. Along the rope, palm leaves or pieces of netting are attached to attract small fishes. The latter will attract big fishes and aggregate them under the floats of the payaos. The payaos used in the operation are of local design, are cheaper to construct, easy to install and maintain. Payaos installation will be carried out from **27 March-3 April 2006** in tuna fishing ground near Pulau Layang Layang.



## **TANJONG BADAK hatchery**

Pulau Layang Layang Project Office with the cooperation and technical support services from Sabah Department of Fisheries Fish Breeding Centre in Tanjong Badak has been involved in fish seed production for Pulau Layang Layang Aquaculture Project. Amongst fish species produced in this hatchery are mouse grouper and tiger grouper. For Pulau Layang Layang aquaculture project, tiger grouper is selected to be produced since the growth rate is better compared to mouse grouper. Grouper fingerlings will be nursed in Tanjong Badak until the size of 70 gm before they are transferred to nursery cages in Sandakan.



# LAND BASED ACTIVITIES





## First **TECHNICAL VISIT**

The Technical Visit by a team headed the Sec-Gen of Ministry of Agriculture and Agro-Based Industry is scheduled from **30-31 March 2006** with the aim to tour and witness the progress of Pulau Layang Layang Fisheries Development Projects. The Project Coordinator, the Head of MARSAL and the Aquaculture Project Leader will brief the honourable guests on the latest development of the projects during the visit.



A diver in a blue and black suit is swimming underwater, surrounded by several large, dark, spherical artificial structures with circular openings. The water is clear and blue. The diver is positioned in the upper middle part of the frame, with bubbles rising from their breathing apparatus. The structures are scattered across the middle and lower parts of the frame. The overall scene is an underwater habitat rehabilitation project.

## **Research on the REHABILITATION OF LAGOON HABITAT (DoF-USM)**

The purpose of this study is to monitor the biodiversity and health condition of Pulau Layang Layang lagoon before, during and after the aquaculture project is in operation. The first study will be conducted by a group of researchers from DoF-USM from **9-25 April 2006**. The result will assist the Department of Fisheries in monitoring and minimising any impacts from aquaculture activities.



## Third **TECHNICAL VISIT**

The Technical Visit by the SEAFDEC-MFRDMD was scheduled from **17-18 July 2006** with the aim to expose and promote the visiting scientists the possibilities of conducting studies on the corals and fish refugias of Pulau Layang Layang.



# WORKBOAT

## a supporting infrastructure

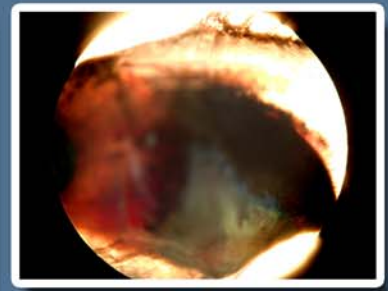
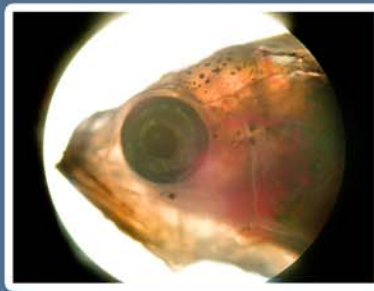
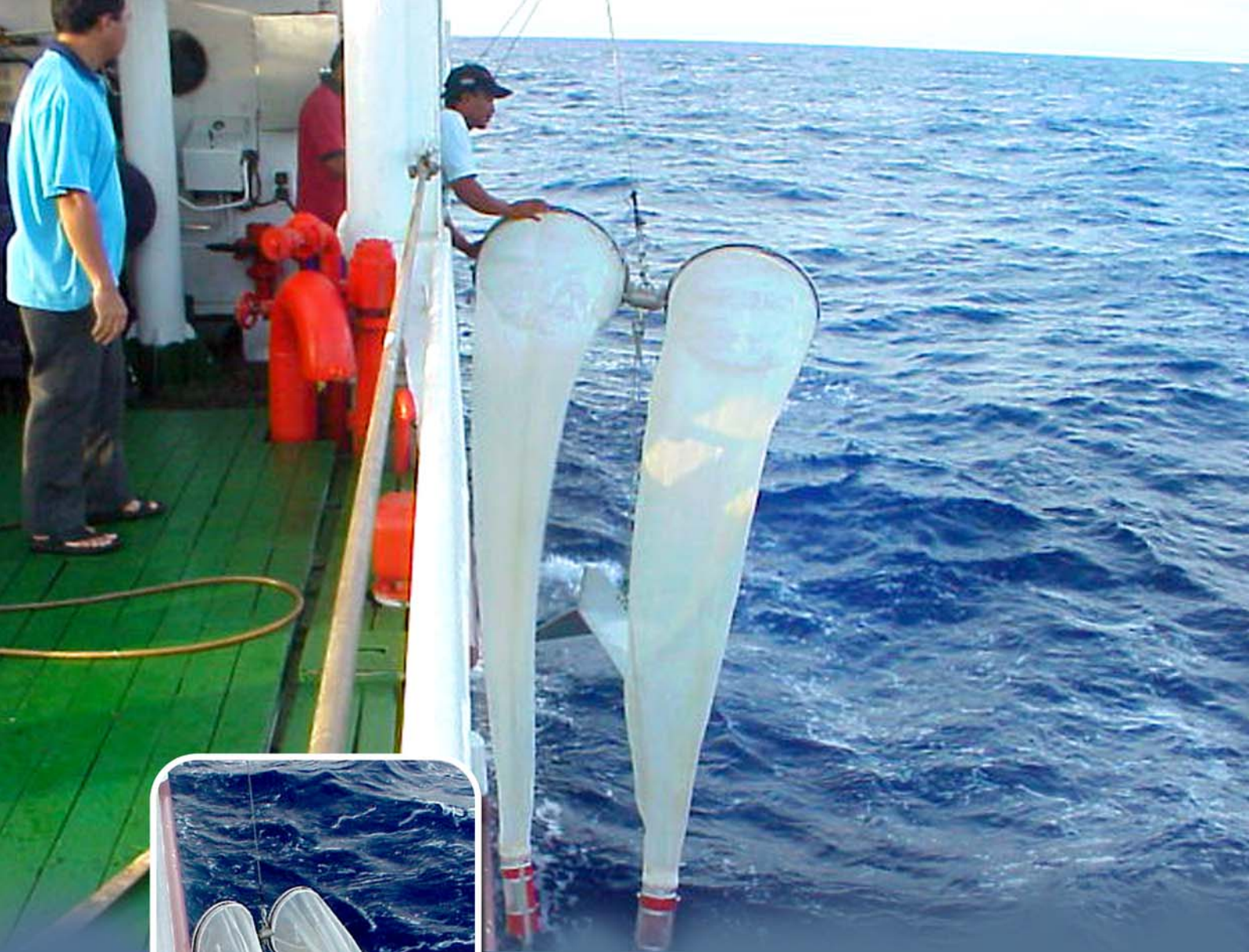
The workboat with dimensions of 13.0 x 4.7 x 1.1 metres and a speed of 11 knots will support aquaculture operation in Pulau Layang Layang. It is equipped with a winch to facilitate net transfers and harvesting of fish. The boat has a pellet feed delivery system which transfers pellet feed from boat to *silo* located on top of semi submersible cage. The boat is nearing completion and will be delivered by **21 May 2006**.



An underwater photograph showing a large, striped fish in the foreground and a school of smaller fish in the background. The scene is set against a backdrop of a coral reef. The lighting is blue, typical of underwater photography.

## **MAMING** expedition

The main aim of this expedition is to determine maming abundance through larvae and adult fish visual census. The result will indicate their spawning ground and adult fish territories where the broodstock can be found. The expedition will take place from **10–24 April 2006**.



## **LARVAE** survey

The survey will be one of the research activities to be implemented along with the maming and lobster expedition onboard K.L. PAUS from **10-24 April 2006**. All samples of larvae collected from the survey will be identified for the species and estimate their abundance. Bongo net is the sampling gear to be used during the survey.



## Catching operation of **TUNA JUVENILES**

Pulau Layang Layang is rich in oceanic tuna resources and reported to be frequently visited by skipjack, yellowfin and bigeye tunas. The area is identified as a potential source of tuna juveniles for fattening culture. Tuna catching method by purse-seine net enables live tunas to be caught and transferred into a towing net before towed to intended farming location in Pulau Layang Layang lagoon. K.L. CERMEN will be deployed in tuna catching operation while K.K. SENANGIN II will tow the cage, from **25 April–15 May 2006**.

# Second TECHNICAL VISIT

The Technical Visit by the ICU-JPM is scheduled from **17-18 April 2006** with the aim to tour and witness the progress of Pulau Layang Layang Fisheries Development Projects and later officiate the netloft. The Project Coordinator, the Head of MARSAL and the Aquaculture Project Leader will brief the guests on the latest development of the projects during the visit.





## **LOBSTER expedition to enrich the REEFBALL**

Reefball is a good territorial form of artificial reef for lobsters. Lobsters expedition is planned and intended to enrich the lagoon specifically the Reefball areas with the restocking of lobsters caught during expedition. The expedition will take place from **10-24 April 2006**.

# SEMI SUBMERSIBLE cage

Three units of semi submersible cage will be placed in the Pulau Layang Layang lagoon as a grow-out cage of maming, grouper and tuna. Tuna caught during catching operation of tuna juveniles will be transferred to the semi submersible cage. For this purpose, operators of these cages will undergo the on-site training before and after delivery of the cages to Pulau Layang Layang.



