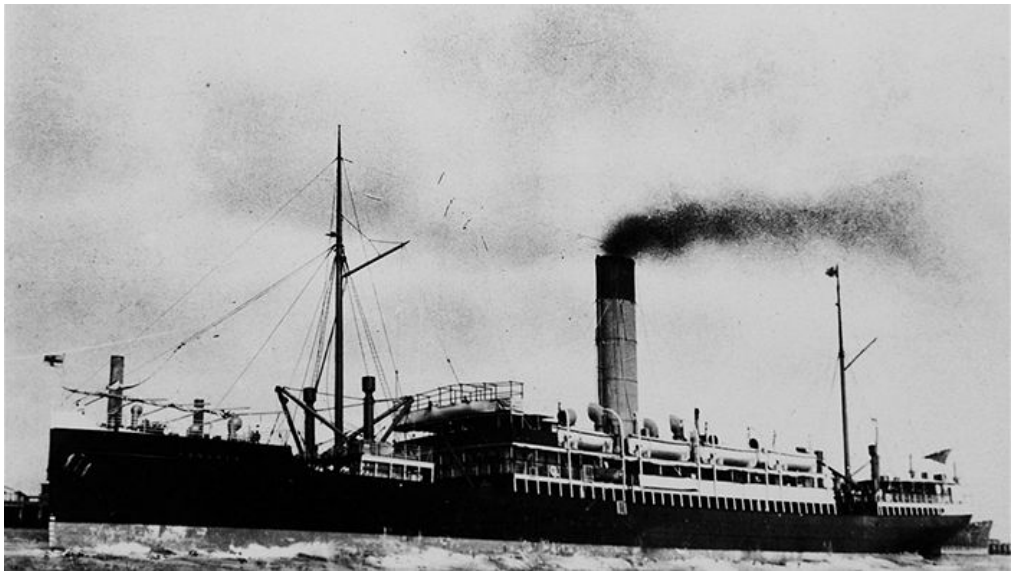
Yongala Diver
Distinctive Specialty Course
Instructor Outline



This course provides knowledge regarding the historical background and current legislation of a prominent wreck diving location in Queensland and the training required to allow the candidates to competently and safely plan, organise and conduct dives thereon.

A. Course Overview

The goals of the Yongala Diver Distinctive Specialty Course are:

a) To review the history and significance of diving at this geographic location.
b) Te review legislative requirements and other relevant literature applicable to this geographic location.
c) To review the advantages and limitations of diving this particular wreck site.
d) To demonstrate understanding of wreck layout, hazards and navigation
e) To review existing deep diving skills.

B. Course Requirements

1. Prerequisite certification
   PADI Open Water Diver (or equivalent) with Deep dive experience
2. Minimum age of 15
3. Student to Instructor ratio: 4:1
4. Nominal course duration: eight hours/one day
5. Minimum two (2) open water dives
6. Minimum Instructor rating: Open Water Instructor certified as a Yongala Diver Distinctive Specialty Instructor.
7. Maximum depth 30 metres

C. Equipment and Material Requirements

Students and instructional staff to be fully equipped in standard diving gear and conform to the philosophies and intent of PADI General Standards and Procedures. This course is performed with open circuit equipment that may also include but it not necessarily limited to:

1. Equipment

i. Depth gauge/computer.
ii. Timing device.
iii. Slate for noting decompression information/blank slate for communication and backup tables
iv. Camera
v. Inflatable signal tube
vi. Reel
vii. Knife/cutting device and backup knife/cutting device
viii. Compass
ix. Underwater light
x. Ascent/descent lines
xi. First aid kit
xii. Emergency oxygen
xiii. Emergency assistance plan for the dive site/s chosen for the course

2. Materials and teaching aids:

(i) Instructor reference materials

- PADI Wreck Diver specialty instructor outline
- PADI Enriched Air manual
- Refer to: https://en.wikipedia.org/wiki/SS_Yongala
- Local sketch and outlines of the SS Yongala appropriate sketch found at: wreck:http://www.ehp.qld.gov.au/assets/documents/land/heritage/dive-qld-shipwreck-yongala.pdf

(ii) Student reference materials

- Encyclopaedia of Recreational Diving
- Refer to: https://en.wikipedia.org/wiki/SS_Yongala
- Local sketch and outlines of the SS Yongala appropriate sketch found at: wreck:http://www.ehp.qld.gov.au/assets/documents/land/heritage/dive-qld-shipwreck-yongala.pdf

iii. Recognition materials

- PIC envelopes
- Specialty Diver Certificates

3. Recommendation: To undergo Deep Diver and Wreck Diver specialty courses to complement this course and become two more

steps closer to achieving the specialty training prerequisite for achieving the PADI Master Scuba Diver certification.

D. Academic Topics

The following is an actual presentation outline. Directions to, or comments for, the instructor are enclosed in [brackets]

1. Introductions, course overview and welcome to the course:

i. Introductions
ii. Course goals
iii. Classroom presentations [Give the dates and locations of venue.]
iv. Open water training dives: Two (2) dives required to no deeper than 30 metres
v. Performance assessment. [Note to instructor: You are to ensure that all performance requirements have been met. Skills performed on-site are to be directly observed. Academic assessment may be accomplished through discussions with students and oral quizzes. Tell the class how their performance will be evaluated.]
vi. Certification: Upon successful completion of the course, you will be awarded the PADI Distinctive Specialty Diver Certification as a "Yongala Diver"
vii. Class requirements: Course costs [Explain all course costs], Equipment needs, and materials used during the course and attendance requirements.

viii. Administration: Collect course fees, enrolment forms, [Continuing Education Administration Document or Standard Safe Diving Practices Statement of Understanding, PADI Medical Statement, Liability Release and Express Assumption of Risk.

2.

(a) History and significance of this diving location

The SS Yongala [please refer to https://en.wikipedia.org/wiki/SS_Yongala]

Citing from the above reference:

The passenger ship SS Yongala sank off Cape Bowling Green, Queensland, Australia on 23 March 1911. En route from Melbourne to Cairns she steamed into a cyclone and sank south of Townsville. All 122 aboard were lost, and traces of the ship were not found until days later, when cargo and wreckage began to wash ashore at Cape Bowling Green and at Cleveland Bay. It was believed that the hull of the ship had been ripped open by a submerged rock. The wreck, which has become a tourist attraction and dive site, was not found until 1958.

On 14 March 1911, under the command of Captain William Knight, Yongala embarked on her 99th voyage in Australian waters. She left Melbourne with 72 passengers, heading for Brisbane, where she arrived on 20 March. In Brisbane, most of the passengers from Melbourne disembarked, and new passengers and cargo headed up the Queensland coast (including the racehorse

Moonshine and a Lincoln Red bull) were loaded. A harbour inspection found Yongala to be "in excellent trim", and she sailed for Mackay, where she was due on 23 March.

Despite delays in Brisbane, Yongala arrived in Mackay on the morning of 23 March. After the transfer of passengers and cargo, the ship sailed north for Townsville at 1:40 pm, carrying 49 passengers, 73 crew, and 617 tons of cargo in the lower hold. Five hours later, the lighthouse keeper of the Dent Island Light saw Yongala sail into the Whitsunday Passage; the last known sighting of the ship. Shortly before the vessel left sight of land at Mackay, a telegram was received by the Flat Top signal station warning of a tropical cyclone between Townsville and Mackay. Flag and wireless signals from the station prompted several ships to take refuge at Mackay, but Yongala did not see the flags, and was yet to be fitted with wireless equipment.

Yongala sank during the cyclone on 24 March 1911. All of her 122 passengers and crew died in the tragedy.

(b) Legislative requirements

i. In June 1981 the SS Yongala was gazetted as an historic shipwreck under Section 5 of the Commonwealth Historic Shipwrecks Act 1976.
ii. Registered on the Queensland Heritage Register the wreck falls within the purview of the Queensland Heritage Act 1992 – SECT 113
iii. Because of the great loss of life, the wreck is considered a mass grave site and to be respected as such.

iv. Fines of up to $5000 are the penalty for entering the wreck.

(c) Advantages and limitations of diving on the SS Yongala

Advantages

i. Access to the dive site is via dive vessel utilised by licensed diving operators such as Yongala Dive operating from Alva beach near Mackay in North Queensland.
ii. The Yongala is a vessel of approximately 106 meters in length and offers many different areas to dive. It lies at a depth of approximately 30m to the keel and 16 meters topside. It is easily diveable for those who hold basic diver certification with some deep diving experience. Most dive operators insist on divers holding at least an Advanced Open Water certification and urge use of Enriched Air to extend no-decompression limits.
iii. The site is well buoyed with substantial ropes positioned clearly to assist with ease of descent, ascent and decompression stops.
iv. At two dives a day, it is possible to spend a week of diving this vessel and still find a new part to discover.

Disadvantages

v. There are no lines laid for penetration. Even though many entry and exit points appear easily accessible and visible, access into the wreck is forbidden.
vi. Classified as a mass grave, entrance into the wreck is prohibited with severe penalties for offenders.
vii. Inclement weather makes the dive site undiveable**.**

d. Current wreck knowledge, wreck layout, hazards and navigation

i. Current wreck knowledge [discuss students' experience/knowledge levels]
ii. Wreck layout

Refer PADI Wreck diver manual and
www.research.usf.edu/dric/diving/docs/wreck-diving.ppt
Identify points of interest, overall condition and hazards

The following sketch is best viewed at the web site indicated to review greater detail of the wreck.

Copy courtesy:
http://www.ehp.qld.gov.au/assets/documents/land/heritage/dive-qld-shipwreck-yongala.pdf

iii. General hazards to consider [discuss relevant items briefly and recommend full Wreck diver certification protocols]

- Sharp Objects
- Entanglement issues
- Aquatic Life
- Structural integrity
- Surge and suction pockets created by currents
- Loss of direction
- Collapsed or blocked passageways
- No direct access to the surface
- Restricted passageways
- Falling objects
- Silt
- Entrapment
- Loss of gas supply
- Stress recognition
- Buddy separation

iv. Navigation

- Baseline navigation
- Features noted
- Following the ship's layout
- Line-laying

(e) Review of dive planning procedures

Many deep wrecks and those requiring advanced skill sets are found at remote locations. Aspects of planning dives in remote areas (e.g. those dives conducted hours away from dive services, emergency medical personnel, etc.) require more consideration than regular wreck diving trips. This is one of those wrecks that fall into this category. These aspects to consider may include:

i. Plans need to cover more logistics – food, water, sleeping arrangements, quantities of gas required, compressors for filling tanks, etc.
ii. Emergency procedures – may need to plan for complex evacuations, having appropriate medical supplies available and people who can use them (e.g. several hours worth of emergency oxygen). Divers Alert Network (DAN) membership and insurance is a valuable asset at this location.
iii. Thinking in terms of self-sufficiency (e.g. what would you do if the boat engine broke down?). At this geographic location, it is a long swim home. Submersible EPIRB recommended at such remote dive sites.
iv. Diving this site with enriched air (nitrox) is encouraged as regular dive trips here usually cater for only two dives with a relatively short surface interval. Using such as EAN32 will allow divers greater freedom range on a second dive whereas using air will severely limit depth and/or time limits. Given that most divers wish to get the most out of their visit here, using enriched air is a sensible option. If not already certified as such, divers are strongly encouraged to gain their Enriched Air certification prior to visiting this location.

E. Open Water Dives

Two (2) dives are to be performed over at least one day. Prior to all dives gas analysis must be completed for all gas mixtures being used (if using enriched air).

(i) Open Water Training Dive One

Learning Objectives.

By the end of this dive, you will be able to:

- ***Perform a correct entry appropriate to the dive site***
- ***Demonstrate appropriate streamlining of all dive equipment***
- ***Correct weighting and adjust buoyancy as required at depth***
- ***Use correct finning techniques to avoid silt-up***
- ***Observe and sketch/photograph a section of the wreck***
- ***Perform an ascent rate of no more than 18 metres/minute or as indicated by the divers' computer***
- ***Perform appropriate safety stops and exit***

a. Briefing

- Evaluate conditions
- Facilities at dive site
- Entry technique to be used
- Exit technique to be used
- Wreck position, bottom composition, expected features and points of interest
- Depth range
- Planned dive time limit
- Review communication
- What to do if an emergency arises

b. Plan Dive

- Assign depth; have students determine theoretical depth and no-decompression limit [you should check these]

- Record no-decompression limit and maximum depths on slates
- Review depth gauges and instrumentation; each student should know how to account for behaviour of his/her instrumentation while diving
- Review planned dive times

c. Predive

- Prepare personal equipment including all extra emergency equipment
- Don equipment
- Predive safety check
- Proper entry
- Weight adjustment for neutral buoyancy
- Maintain buddy contact

d. Open Water Training Dive One

- Descend in buddy teams
- Perform required objectives.
- Ascent not to exceed 18 metres/minute with appropriate safety stops as planned.

e. Post dive

- Proper exit
- Remove and stow equipment

f. Debrief

- Assess performance, make suggestions, give positive reinforcement
- Students calculate their ending pressure groups—review for correct calculation
- Log dive (Instructor signs log)

(ii) Open Water Training Dive Two

Learning Objectives.

By the end of this dive, you will be able to:

- ***Perform a correct entry appropriate to the dive site***
- ***Demonstrate appropriate streamlining of standard and additional safety and dive equipment***
- ***Correct weighting and adjust buoyancy as required at depth***
- ***Observe and record by sketch or photograph the section of the vessel dived and related marine life***
- ***Dive with minimal impact on the environment***
- ***Perform an ascent rate of no more than 18 metres/minute or as indicated by the divers' computer***
- ***Perform appropriate safety stops as planned.***
- ***Perform a deep water exit***

a. Briefing

- Evaluate conditions
- Facilities at dive site
- Entry technique to be used
- Exit technique to be used
- Section dived, expected features and points of interest
- Depth range
- Planned dive time limit
- Review communication

- What to do if an emergency arises

b. Plan Dive

- Assign depth; have students determine theoretical depth and no-decompression limit [you should check these]
- Record no-decompression limit and maximum actual depth on slates
- Review depth gauges and instrumentation; each student should know how to account for behaviour of his/her instrumentation while diving
- Review line communications
- Review planned dive times

c. Predive

- Prepare personal equipment including all extra emergency equipment
- Don equipment
- Predive safety check
- Proper entry
- Weight adjustment for neutral buoyancy
- Maintain buddy contact

d. Open Water Training Dive Two

- Descend in buddy teams
- Perform required objectives.
- Retrieve guideline
- Ascent not to exceed 18 metres/minute with appropriate safety stops as planned.

e. Post dive

- Proper exit
- Remove and stow equipment

f. Debrief

- Assess performance, make suggestions, give positive reinforcement
- Students calculate their ending pressure groups—review for correct calculation
- Log dive (Instructor signs log)

F. KNOWLEDGE REVIEW

1. Describe two significant features about this geographic location

(i)

(ii)

2. Maximum depth of this course_____

3. What legislation restricts penetration of this wreck?

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4. List two advantages of diving this location

(i)_____

(ii)_____

5. List two disadvantages of diving this location

(i)_____

(ii)_____

I have had explained to me and I understand the questions I missed.

Student Signature _____ Date _____

F. KNOWLEDGE REVIEW – MODEL ANSWERS

1. Describe two significant features about this geographic location

(i) Not in sight of land

(ii) Well marked and buoyed for slow descents and ascents

2. Maximum depth of this course

30 metres

3. What legislation restricts penetration of this wreck?

i. ***Historic Shipwrecks Act 1976.***

ii. ***Queensland Heritage Act 1992***

4. List two advantages of diving this location

(i) The vessel offers many different areas for diving without concern for repetition

(ii) Local guides not mandatory for experienced divers

5. List two disadvantages of diving this location

(i) Restricted access

(ii) Very exposed in poor weather

I have had explained to me and I understand the questions I missed.

Student Signature _____ Date _____