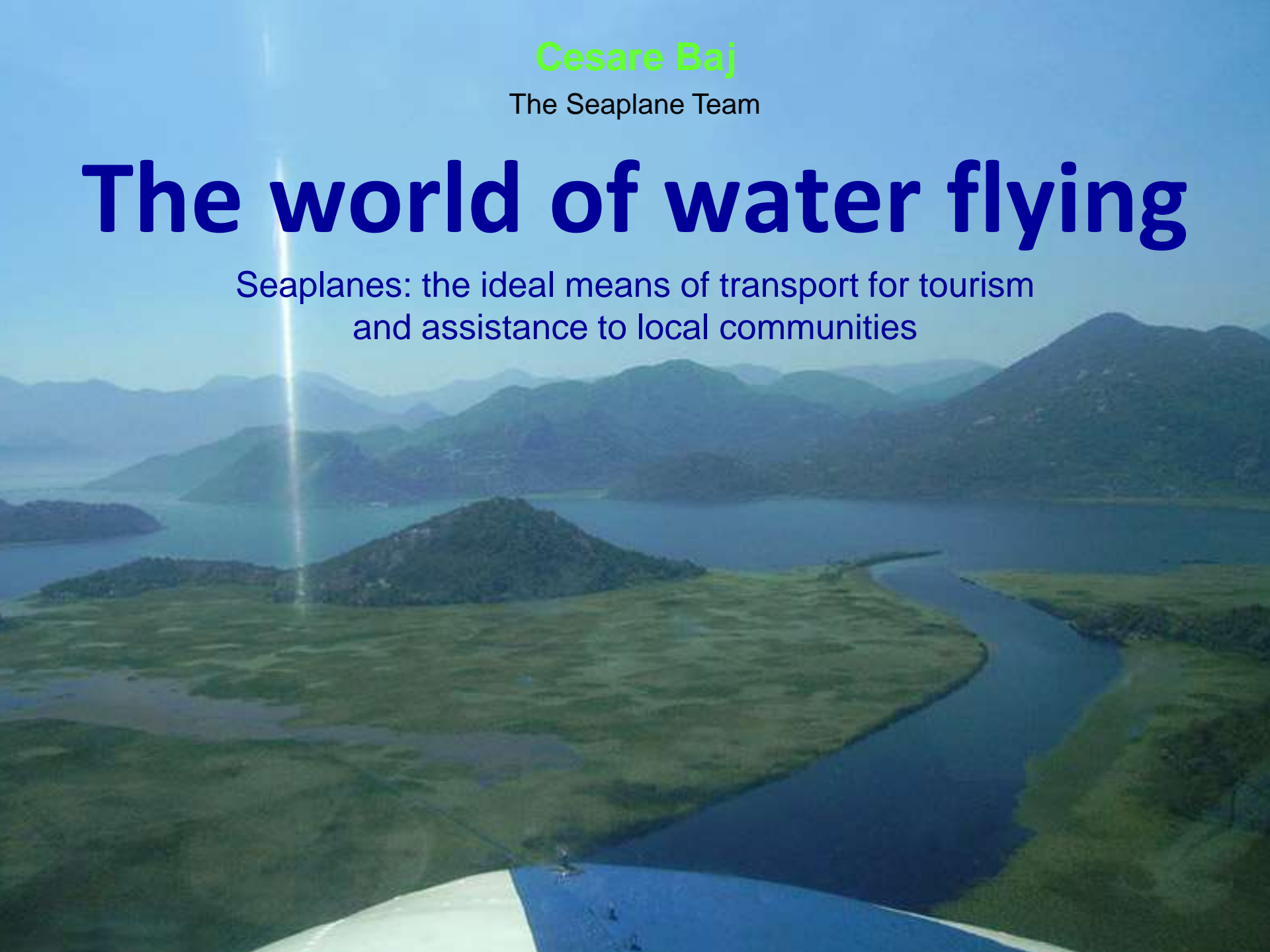


Cesare Baj

The Seaplane Team

The world of water flying

Seaplanes: the ideal means of transport for tourism
and assistance to local communities



Seaplanes

A long and fascinating history

What seaplanes are used for

Characteristics of seaplanes

Operational aspects of water flying

Environmental impact of seaplanes

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Seaplanes



A seaplane is an aircraft that can take off and land on water



Seaplanes can have floats, and are then called “floatplanes”



or have a hull, and are called "flying boats"



Then there are amphibious aircraft, which thanks to a landing gear, are able to operate on land as well as on water.
There are amphibious flying boats



and amphibious floatplanes

A long and fascinating history

1751. - Hydravion DE MARCAY-MOONEN

Appareil à ailes pivotantes et incidence variable, le pilote peut de son siège, sans aucun aide, replier les ailes sur le fuselage, remettre son moteur en marche et se diriger, tel une automobile, sur n'importe quelle route, le train arrière étant constitué par 2 roues orientables commandées par le pilote sur le même palonnier que la direction. La disposition des commandes des ailes permet également de modifier leur angle d'attaque, facilitant la mise au point en déplaçant la position des centres. Envergure 13 m. 50, longueur 11 m. 25, surface portante 29 m. poids 450 kgr. à vide. Moteur Anzani 160 HP.

J. H



Seaplanes were built from the very beginning of aviation,
both in the form of floatplanes



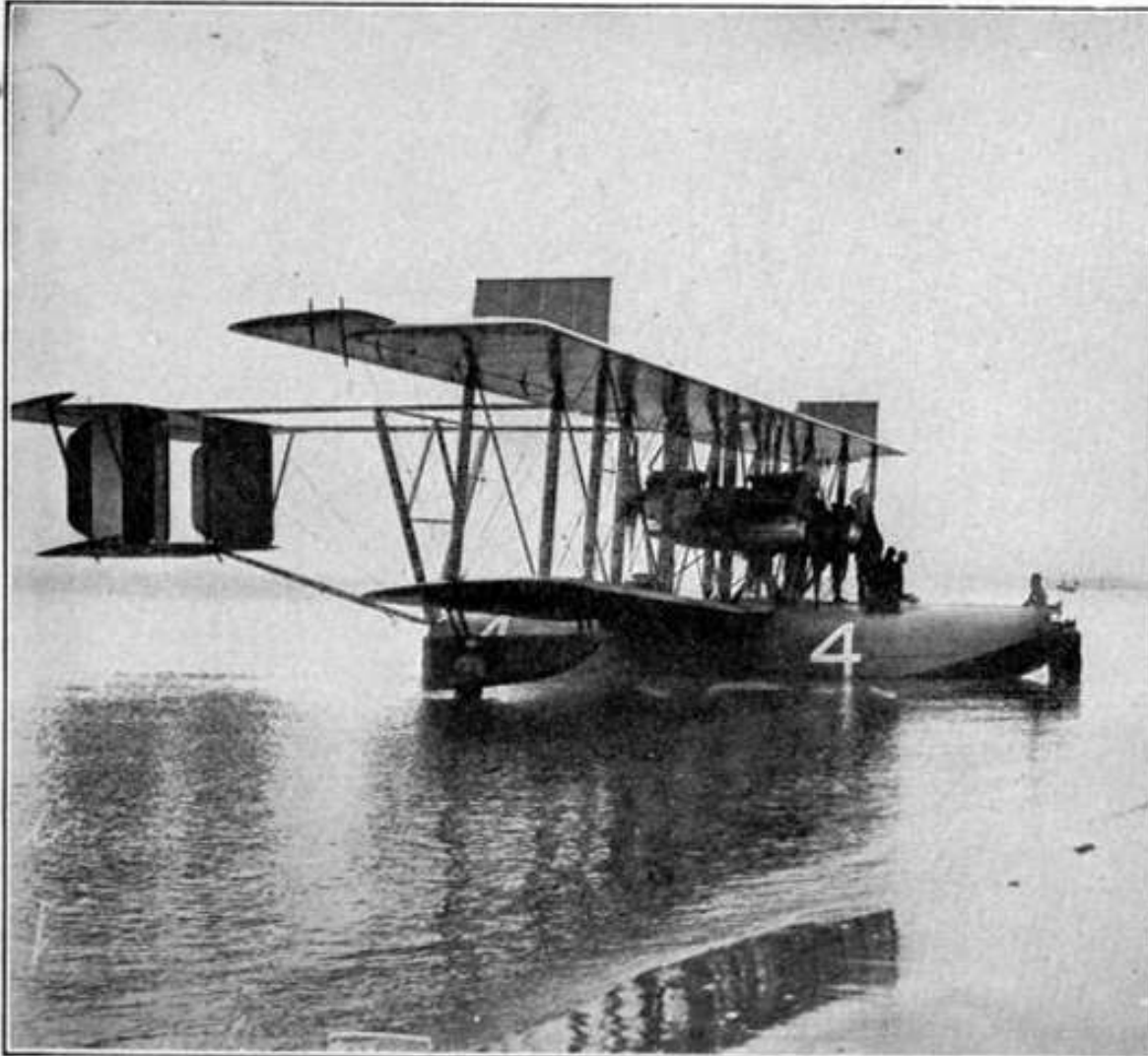
U. S. NAVY FLYING BOAT, FLYING OVER KENKA LAKE, HAMMONDSPORT, N. Y.

and in the form
of flying boats





Seaplanes have a glorious history and were the ideal aircraft for the first long range and transoceanic flights



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THE FIRST PLANE TO CROSS THE ATLANTIC

The honor of being first to make the journey from America to Europe by airship fell to Lieut.-Commander A. C. Read, who piloted the U. S. seaplane, NC-4, from Newfoundland to Lisbon, Portugal, with a stop at the Azores. The photo shows Lieut.-Commander Read and the seaplane, NC-4, in readiness for their long trip, which begun May 16, and ended May 27th.

Seaplanes have been used for epic enterprises, such as the first transatlantic flight, made in 1919 by Captain Read...



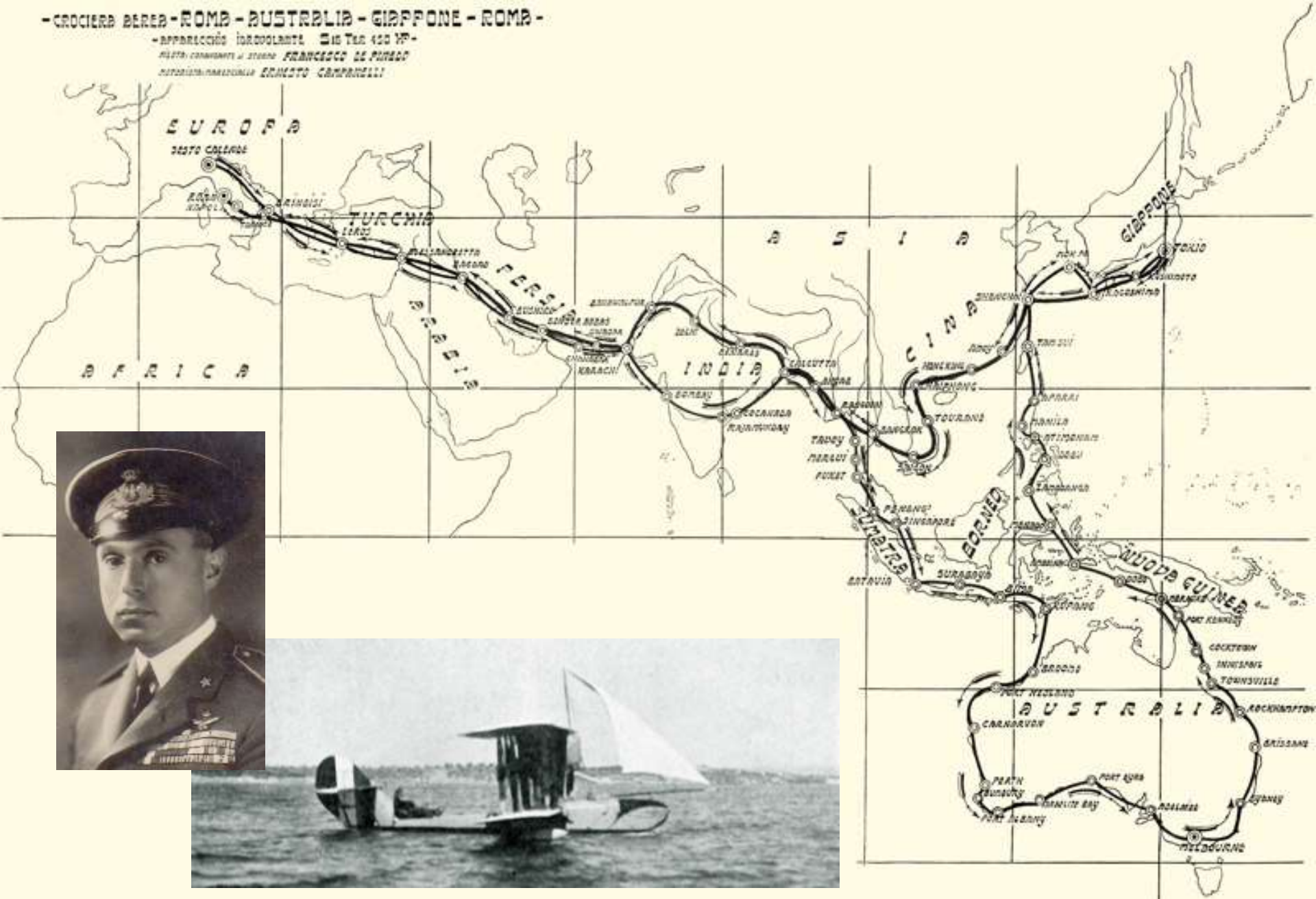
...or the several long journeys Charles Lindbergh
made in Asia and **Europe...**

-CROCIERA BERS-ROMB-AUSTRIA-GIAPPONE-ROMB-

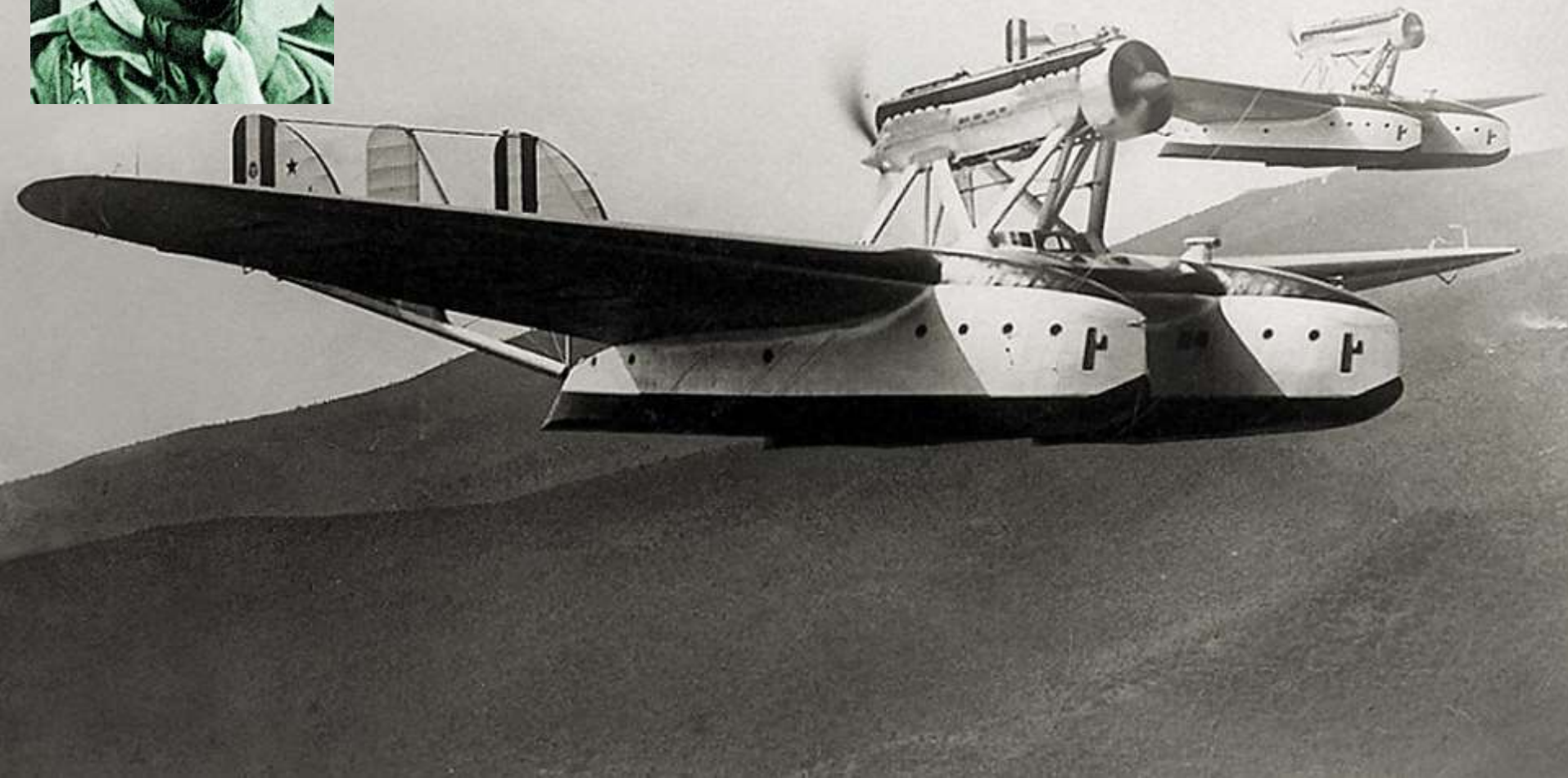
-APPARICIONE INNOVOLANTE. 216 TAC 420 W-

ALBERTO CAMMARANO e STENO FRANCESCO DE PUTATO

STREPTOMYCES *ELBERTO CAMPANELLI*



...or the 1925 trip across three continents made by Francesco De Pinedo...



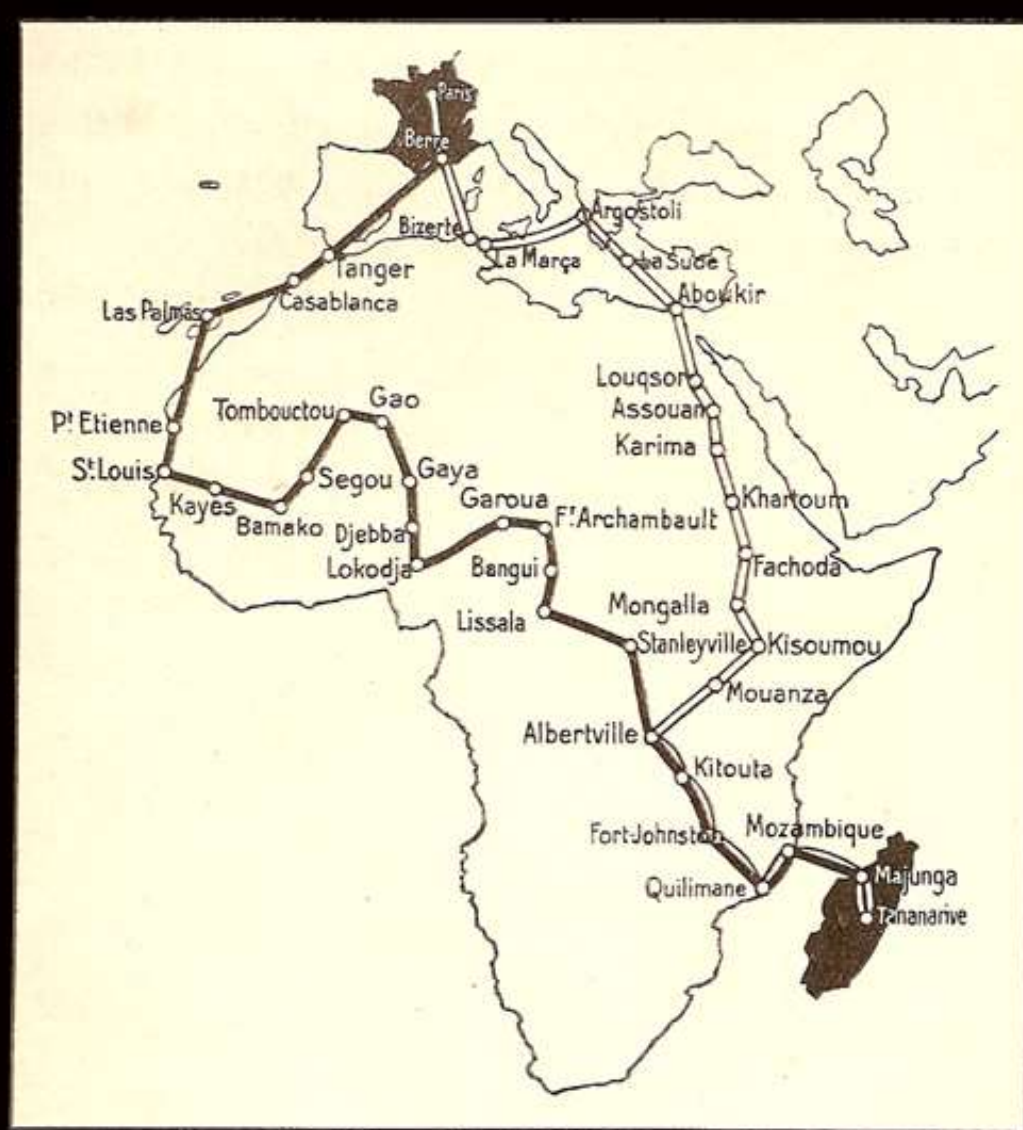
... or the celebrated Atlantic crossing of Italo Balbo in 1933,
with his fleet of 24 double-hull **seaplanes**...



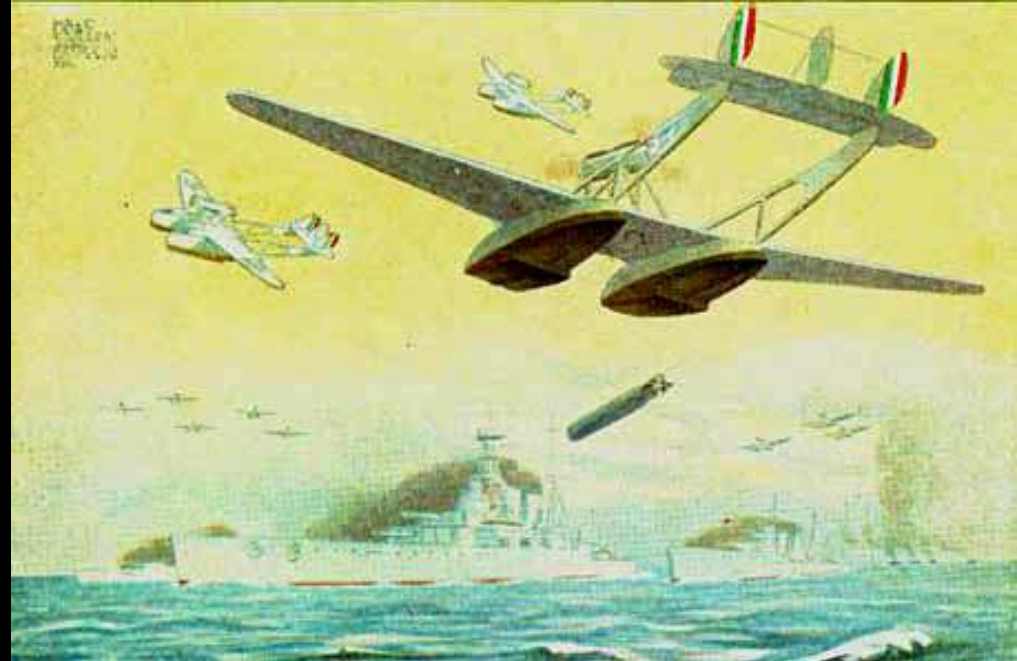
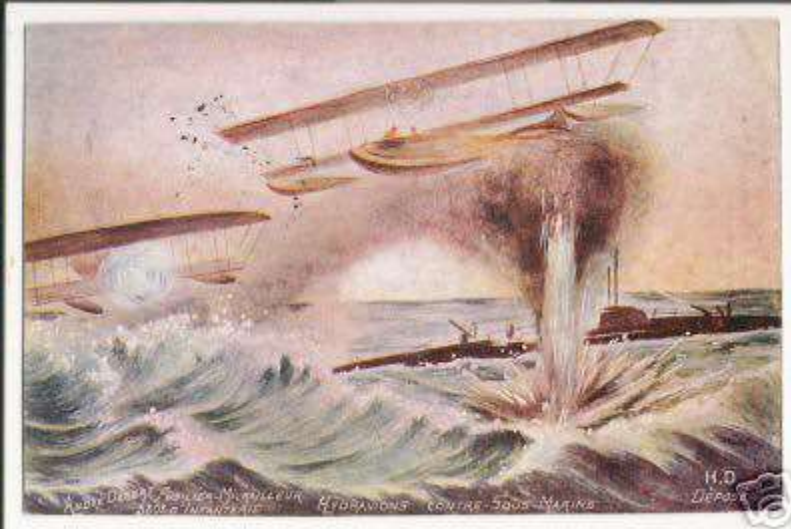
...or – to give another example - the adventurous travels
of Jean Mermoz and Antoine de Saint-Exupéry
across the Southern Atlantic Ocean



Seaplanes allowed important explorations
such as Amundsen's expedition to the Arctic, in 1925...



...and the journey of the Frenchman Bernard through the heart of Africa, in 1926



Seaplanes have been used during the wars as bombers and torpedo bombers...



...but were mainly used
for patrolling...





... and offering assistance



During wartime,
the most important role
of seaplanes has always been
search and rescue





Thousands of people owe their lives to seaplanes



Seaplanes have become the perfect means of transport to reach the most remote **areas...**



...such as the far North of the continents...



FLY TO SOUTH SEA ISLES



Via PAN AMERICAN



SAN FRANCISCO-HAWAII Overnight!



Via PAN AMERICAN - **TO THE ORIENT**

...the islands of the Pacific Ocean...



...or the Amazonian forest, just to name a few

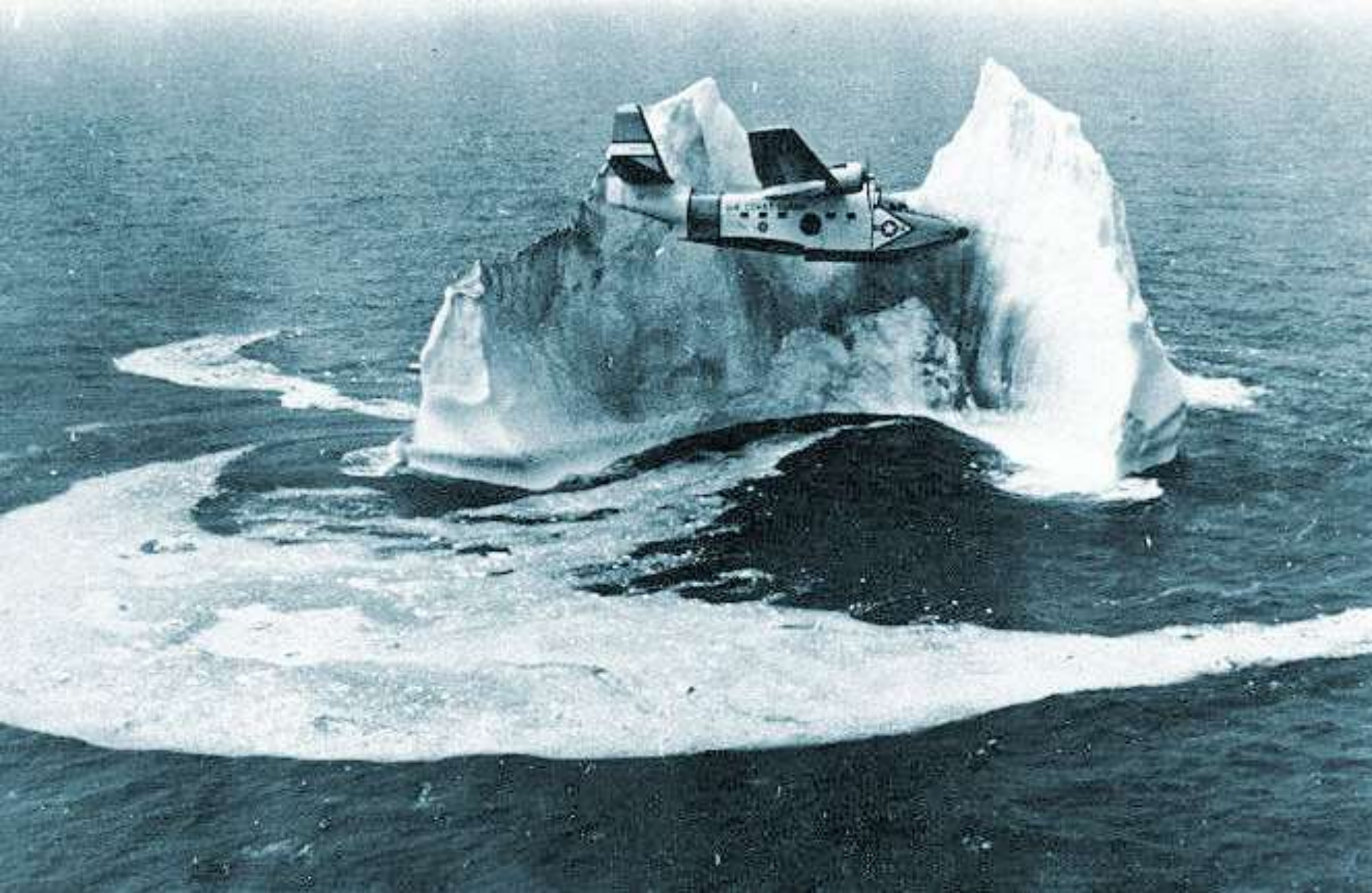
What seaplanes are used for



Government agencies use seaplanes
in fire extinguishing **operations...**



...in maritime search and rescue operations...



...or on several types of special missions,
such as iceberg detection and bombing



Private associations use seaplanes to provide medical assistance in remote areas



The majority of seaplanes belong to general aviation. In other words they are aircraft used by private people or small companies for transportation purposes



Regular scheduled seaplane flights take place in just a few places in the world, such as the **West coast of the USA and Canada...**



...while flights on demand are offered in all five continents



Many passengers are taken aboard seaplanes
for sightseeing flights



For this activity the light seaplanes are ideal,
because thanks to their large windows they allow
wonderful visibility



CATALINA SAFARI COMPANY



Now and then an operator offers seaplane cruises of several days



In scarcely inhabited areas
seaplanes are useful for provisioning



Seaplanes can be used for various missions. For instance in Canada and Italy they are used to populate lakes with fish



An unusual, fascinating machine in a charming place:
this is why seaplanes are so often used in videos and **films...**



...and advertisements



Most seaplanes are used by private owners...



...and for tourism





Companies that host their guests in jets and helicopters often offer them a seaplane ride to remote lakes and rivers, for fishing and enjoying the wilderness

Where seaplanes are located



Nowadays, seaplanes are present in several well defined areas.
Most of them are on the West Coast of the US and Canada,
from Oregon to **Alaska...**



...but there are many seaplanes in other parts of North America, particularly in Ontario, Quebec, Maine and Florida



In Europe, important seaplane activities can be found in just a few countries, like Sweden, Norway and **Finland...**



...and in Italy, on famous Lake Como



In other European countries a few private seaplanes
and some small seaplane companies operate



In Asia, the Maldives make use of seaplanes for connecting Male airport to tourist resorts



Other seaplane operations are located in Thailand, Indonesia and the Philippines



Others again are operated in Australia, New Zealand and in a few islands of the Pacific, like the Fiji Islands



Russia has a long-standing tradition in military seaplane construction and is now engaged in building seaplanes for civilian purposes

Characteristics of seaplanes



The world of seaplanes has undergone some changes during the last 20 years. In fact, people have begun to realize that seaplanes offer a number of benefits



There is no need for infrastructures, just a stretch of water



A seaplane can operate wherever there is water,
hence in lots of locations, such as on **seashores...**



...on rivers...





...on canals...



...in the wilderness...



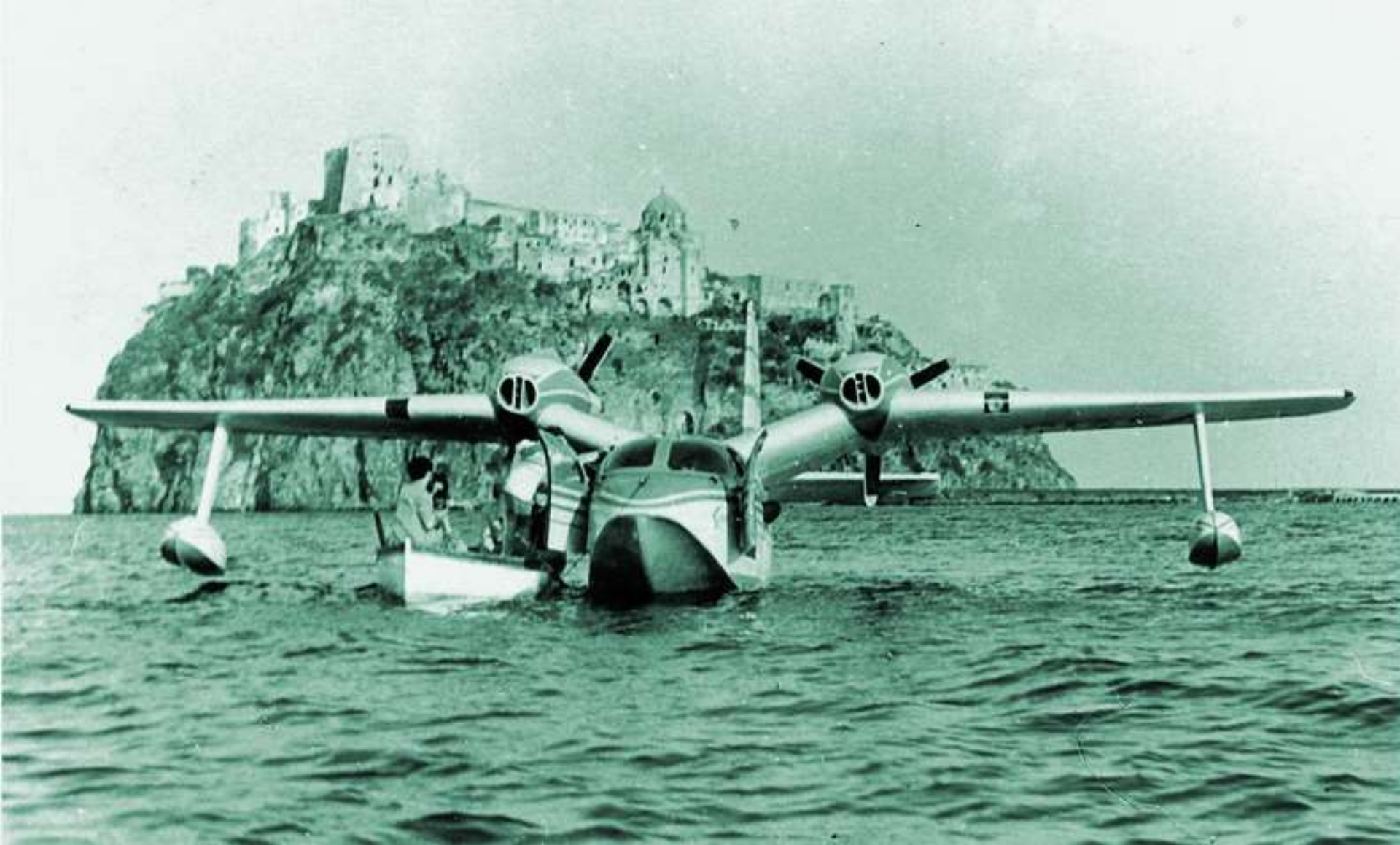
...in the centre of large **towns**...



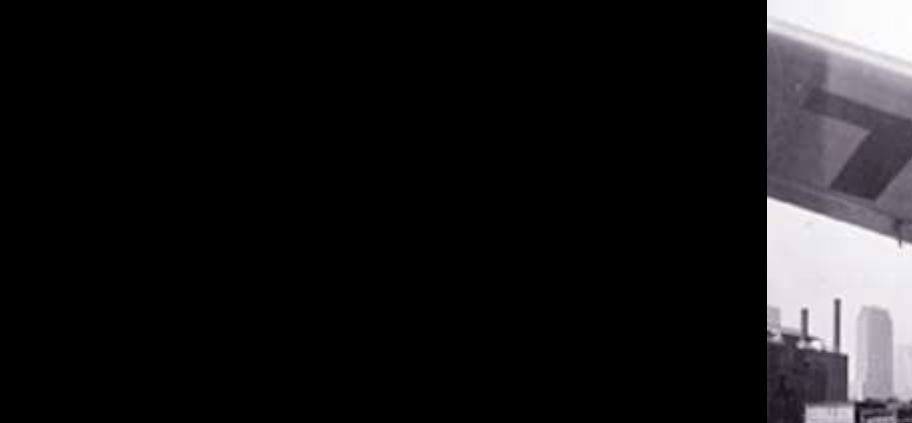
...on small lakes...



...or on big lakes



Seaplanes are flexible like helicopters
but are low-cost flying machines like airplanes. Most of all,
they can operate in many places where helicopters are unable to



Seaplanes can operate in the exact point of travel departure or destination, provided there is a suitable water surface. And a water surface is always present in the most important places...



...in the most beautiful places...



...in the most inhabited places...



...and in the most scenic natural places



Seaplanes take aviation to the people,
promoting the appreciation of science and technology

Operational aspects of water flying



Let's now examine seaplanes from an operational point of view.
Seaplanes can easily operate on unprepared shores...



...at a fixed or floating dock...



...on a sloping ramp...



...or at a buoy



Seaplane activities do not normally impose restrictions on other activities on the same body of **water**...

Idroscalo Internazionale Di Como

- area riservata
- area di rispetto
- area di manovra



...but a large seaplane base, with intense traffic,
can require a reserved area



When not used, a seaplane can be left at shore,
at a buoy or at a **dock**...



...but it is preferable to leave it in a hangar,
where it is also easy to provide the necessary maintenance



There are several ways to take a seaplane from the water to the recovery area and vice versa.
Amphibious seaplanes move on their own landing gear



Special “beaching gears” are applied to some seaplanes before they come out of the water



Non-amphibious seaplanes are normally moved onto a **dolly**...



...lifted...



...or craned

Environmental impact of seaplanes



Seaplanes are extremely environment-friendly
as they do not have immersed propellers
and don't dump fuel or other liquids into the water



Seaplanes transport people to carry out tasks of the highest importance for the environment

MOLTRASIO

Allarme aereo per una chiazza di gasolio nel lago



Seaplane pilots are often the first to detect environmental or pollution problems related to the bodies of water over which they fly

Seaplane safety



Seaplanes are the safest flying machines.
In case of engine failure over water, a seaplane can make
a power-off descent and land on the surface
just like a normal operation



In case of engine failure over land, a seaplane can land on the surface with no risk for the people on board and little or no damage to the airframe. There is almost no risk of tipping over and consequent fire

The exceptional structural strength of flying boats and the presence of massive external structures in floatplanes offer extra protection that has saved thousands of lives when impact with the terrain occurred

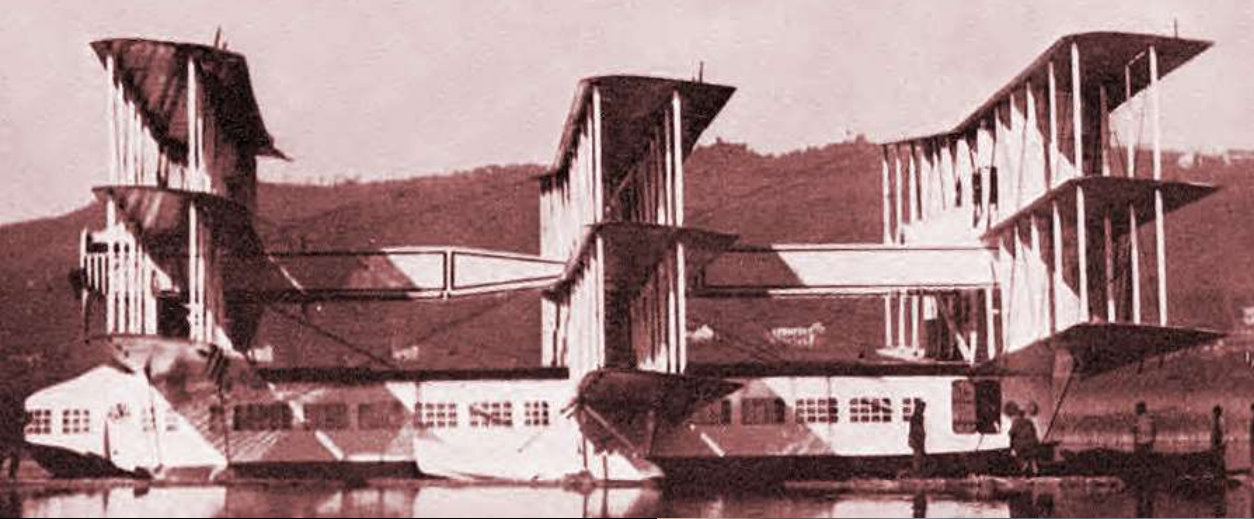
Hard impacts with the water seldom have consequences for the people on board.

Floatplanes can capsize, but normally don't sink and allow the people on board to get out and wait for rescue out of the water

Limitations in the use of seaplanes



We have seen that seaplanes are very versatile, rugged and safe flying machines. They have definitely some limits too. The first is that not all surfaces are suitable for seaplane operations. Normally, an area sheltered from high waves is needed



Seaplanes, due to the presence of floats and to their rugged construction, are more expensive to buy and to maintain; they can carry less weight and fly slower than landplanes



In addition, seplanes require pilots to undergo longer and more expensive training



The most important limitations in the use of seaplanes don't come from nature – wind, waves, extreme phenomena – but from legislation.

In many countries where water aviation has never existed or hasn't existed for decades, regulations require authorization for every single seaplane operation or for any single site where seaplane operations could take place.

This represents the biggest limitation in the development of seaplane activities



Water skiers being towed by a seaplane

On the other hand, there are countries where water aviation developed from the beginning of aviation itself and has never stopped, such as in the USA, Canada, Italy or Scandinavia. In these countries a seaplane can operate in any body of water without the need for specific authorization. Regulation of this type is a fundamental requirement for the development of seaplane activities

In Italy, for instance, the law says:

Art. 8.

Aviosuperfici occasionali

1. È considerata aviosuperficie occasionale qualunque area di dimensioni idonee a permettere operazioni occasionali di decollo e atterraggio di velivoli.

2. L'uso di aviosuperfici occasionali da parte di velivoli è consentito esclusivamente per attività di lavoro aereo. Per l'uso delle aviosuperfici occasionali non sono necessarie la figura del gestore di cui all'art. 3, la segnaletica e l'assistenza antincendio; l'esercente certificato di lavoro aereo effettua preventivamente le proprie valutazioni sull'adeguatezza dell'aviosuperficie sulla base delle condizioni di cui ai punti b) c) d) e) e f) dell'art. 7.2, tenuto conto che, in ogni caso, le dimensioni dell'aviosuperficie devono essere idonee all'effettuazione della corsa di approdo e della corsa di decollo dei velivoli di cui è previsto l'impiego. L'uso di idrosuperfici occasionali per operazioni è consentito anche per attività diverse dal lavoro aereo.

3. L'uso delle aviosuperfici occasionali è limitato ai voli con origine e destinazione nel territorio nazionale senza scali intermedi in territorio di altro Stato.

4. L'uso delle aviosuperfici occasionali ubicate su un'area di proprietà privata è subordinato al consenso del proprietario dell'area; se le aviosuperfici occasionali sono ubicate su un'area di proprietà dello Stato o di enti pubblici, l'uso è subordinato al nulla osta o alla concessione d'uso da parte della competente autorità amministrativa. Nel caso di idrosuperfici occasionali che siano ubicate in aree aperte al traffico nautico pubblico, non sono necessari nulla osta o concessioni d'uso, fermo restando la responsabilità dell'operatore ad operare nel rispetto delle regole della navigazione.

5. Il pilota è responsabile del rispetto della normativa vigente in materia di uso del territorio e di tutela dell'ambiente.

“In case of occasional water surfaces located in areas open to public motor boat traffic, there is no permission or concession required; however the operator is responsible for fully respecting the rules of navigation.”

This means that a seaplane can land wherever boat traffic is allowed, i.e. almost everywhere.

In certain bodies of water limitations can be imposed, but as an exception and for justified reasons

Setting up a seaplane activity



Tourists taken
into the wilderness



Medical assistance
from the air for a village
in Bangladesh



Know-how related to setting up a seaplane activity is scarce in the world. Moreover, seaplane pilots and mechanics need specific training. But once the activity has started, residents and tourists can get services they could never previously imagine



In addition, the presence of such an unusual and fascinating means of transport gives the whole community an image of modernity

Would you like to know more ?

Contact

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