



小博士英汉对照丛书

# 蓝色海洋

BLUE OCENA

*LANSE  
HAIYANG*

马锦龙 田 丽 编著

卢雨菁 译



甘肃科学技术出版社

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## Get to Know Oceans and Seas of the World

### 走进海洋

#### What are Oceans and Seas?

**How large are they?** Oceans and Seas refer to the vast body of salt water on the earth. The total areas of them are about 361 million km<sup>2</sup>, which covers 71% of the total area of the earth's surface. The earth is sometimes referred to as a "water globe" since the water area is much larger than the land area.

**What are Oceans? What are Seas? What are Their Differences?** Oceans refer to the main part of Oceans and Seas. They are deep and vast and they have steady salinity<sup>①</sup> and dynamical<sup>②</sup> system. Seas are the part near lands and are influenced by lands since they are connected with lands. Oceans

#### 什么叫海洋?海洋有多大?

海洋是指地球上广阔而连续的咸水水域,总面积约为 3.61 亿平方千米,约占地球表面积的 71%。由于海洋面积远远大于陆地面积,故有人将地球称为“水球”。

**什么叫海?什么叫洋?海与洋有何区别?** 洋又称大洋,是海洋的主体部分,具有幽深而浩瀚的水域、比较稳定的盐度和独立的动力系统。海是靠近大陆边缘的海洋附属部分,因与陆地相连而受其影响较大。海与洋之间彼此通连,共同形成世界统一的海洋整体。

① salinity: n. 盐分, 盐度

② dynamical: adj. 动力(学), 有力量的





and Seas are the unity of the earth's water area.

There are five great differences between oceans and seas. Oceans have a larger area than Seas. They compose 89% of the water area while seas only compose 11%. Oceans are deeper. Their depths are usually over 3000m. Seas are shallow on the average. Their depths are usually less than 2000m and some only about dozens of meters deep. Oceans have their own flows and tides while seas are dominated by the flows and tides of the oceans. Oceans are far away from lands so their temperature and salinity are steadier and the diaphaneity<sup>①</sup> of water in oceans are higher. Seas are connected to lands so they are changeable as the seasons change and have lower diaphaneity.

### How Deep are the Oceans?

Some oceans are deep and some are shallow, but their average depth is

海与洋之间有五个明显的区别:大洋的面积大,约占海洋总面积的 89%,海的面积小得多,只占海洋总面积的 11%;大洋深度大,平均水深一般都在 3000m 以上,海的水深平均较浅,平均水深一般在 2000m 以下,有的甚至只有几十米深;大洋有独立的洋流和潮汐系统,海则受大洋洋流和潮汐的支配;大洋离陆地较远,受陆地影响小,水温、盐度等要素比较稳定,海水的透明度大;海与陆地接边,受大陆影响大,海洋要素随季节变化大,海水透明度较差。

海洋有多深? 海洋依其地形而有浅有深,其平均深度约 3795m。世界上海洋最深处

① diaphaneity: n. 透明度



about 3795 meters. The deepest place in the ocean lies in the Pacific Ocean. It is the Mariana<sup>①</sup> Fosse<sup>②</sup>, which has a depth of about 11034 meters, near the west bank of the Pacific Ocean.

### How Much are the Sea Water?

Water on the earth is mainly stored in the oceans which has 1.37 billion stere<sup>③</sup> and composes about 97.2% of the earth's water amount.

**Dynamics in Oceans.** Water in oceans and seas are not pacific<sup>④</sup>. It is surfy<sup>⑤</sup> and undulant<sup>⑥</sup>. Three kinds of dynamic system may attribute to<sup>⑦</sup> the movement of water in oceans. They are tides, ocean currents, and waves. Tide is the periodic rise and fall of the waters of the ocean and its inlets, produced by the attraction of the moon and sun. Tide exists everywhere in

是位于太平洋西岸的马里亚纳海沟,为太平洋板块俯冲消减于欧亚板块处,深达11 034m。

### 大洋水体有多少? 地球

上水体主要储存于大洋中,大洋水体有13.7亿立方千米,占地球上总水量的97.2%。

### 海水中的动力 广阔的海

洋并非平静如水,而是波涛汹涌、起伏不定的。引起海洋水体运动的动力系统有三类:潮汐、洋流和波浪。潮汐是由于月球对地球引力的变化而引起的,这种作用是全海洋均有的;洋流则是由于大洋不同纬度、不同深度的水体受太阳光照不均,从而造成温度差而引起的水体对流,洋流主要作用于浅



- ① Mariana: n. 马利亚纳群岛(位于西太平洋)
- ② fosse: n. 壕, 坑, 城河, [地]海渊
- ③ stere: n. 立方米, 立方公尺
- ④ pacific: adj. 和平的, 平静的
- ⑤ surfy: adj. 浪花的, 波涛汹涌的, 波涛多的
- ⑥ undulant: adj. 起伏的, 波状的
- ⑦ attribute to: v. 归因于

the oceans and seas. Ocean current is caused by water getting different sunshine and having various temperatures in different latitude and depth. It often functions from shallow seas to deep-ocean. Wave is another factor that affects the seas and oceans.

### Colors of Oceans and Seas.

Color of the seawater is also called sea-color. Because of the suspended matters and soluble matters in the water, the colors of the ocean differ from blue to Kelly<sup>①</sup> to brown when the sun shines to refract<sup>②</sup> them. Generally speaking, water in the oceans is blue while in seas is Kelly or brown. Some Seas are named after the colors of them, such as the Yellow Sea, the Red Sea. The colors of the oceans and seas tell people the composition of the suspending and soluble matters. The Red Sea looks red because of red algae that live in this sea.

海——深海；波浪则是在潮汐和洋流基础上作用于海洋的一种动力。

**海水的颜色** 又称为海色。由于海水中包含有一些悬浮物质和溶解的物质，当阳光照射时，表层进行散射而造成了海水的颜色，由蓝到黄绿及褐色。一般大洋的海水是深蓝色，近岸的海水为蓝绿色和黄褐色。有些海用海色来命名，如黄海、红海等。海色在一定程度上反映了海水中悬浮和溶解组分的性质，红海是由于海水中有大量的红色藻类繁殖而呈红色。

① Kelly: n. 黄绿色，鲜绿色

② refract: vt. 使折射，测定……的折射度



### Salinity of Oceans and Seas.

The salinity (salt content) of ocean water varies. It is about 3.5%. Many things happened in the oceans and seas have close relationship with the distribution and variation of salinity. Therefore, we can say salinity is the primary characteristics of the oceans and seas. The saltiest water is in the Red Sea and in the Persian<sup>①</sup> Gulf, which have a salinity of about 4% (due to very high evaporation<sup>②</sup> rates and low fresh water influx<sup>③</sup>). The least salty seas are in the polar regions, (Gulf of Bothnia<sup>④</sup> in the north part Baltic Sea<sup>⑤</sup>) where both melting polar ice and a lot of rain dilute<sup>⑥</sup> the salinity, which is about 0.3%. Even in the same area, salinity of ocean water may be different both vertically and horizontally.

海水的盐度 一般都在 35‰左右, 海洋中发生的许多现象都与盐度的分布和变化有密切关系, 所以盐度是海水的基本特性。有些海区如红海, 由于日照相当强烈, 蒸发量大, 盐度可高达 40‰以上, 称为咸化海; 而降雨量大, 河流注入较多的波罗的海北部的波的尼亚湾里, 盐度可低至 3‰, 为淡化海。即使同一海区, 海水的盐度在水平方向垂直方向上都有不同的变化。

① Persian: n. 波斯人[语] adj. 波斯的, 波斯人[语]

② evaporation: n. 蒸发(作用)

③ influx: n. 流入

④ Gulf of Bothnia: n. 波的尼亚湾

⑤ Baltic Sea: n. 波罗的海

⑥ dilute: v. 冲淡, 变淡, 变弱, 稀释 adj. 淡的, 弱的, 稀释的

**Ocean and Climate.** Heat energy that can lower  $1^{\circ}\text{C}$  of  $1\text{cm}^3$  ocean water temperature can raise  $1^{\circ}\text{C}$  of  $3100\text{cm}^3$  air temperature. The temperature of ocean water does not change as rapidly as that of the air. Mainly affected by the ocean, the climate in the coastal area is not very cold in winter or very hot in summer.

**“Homeland” of Rain and Weather.** To evaporate water from the oceans, heat energy from the Sun is needed. The water vapor<sup>①</sup> condenses<sup>②</sup> when the temperature falls, forming snow or frost (tiny droplets<sup>③</sup> in clouds). When the clouds meet cool air over land, precipitation<sup>④</sup> (rain, sleet<sup>⑤</sup>, or snow) is triggered, and water returns to the land or sea. So the Ocean plays the role of balancing the water vapor around the Earth.

**海洋与气候** 比方说使  $1\text{cm}^3$  的海水温度降低  $1^{\circ}\text{C}$  时所放出的热量, 可使  $3100\text{cm}^3$  的空气温度升高  $1^{\circ}\text{C}$ , 所以海水的温度不会升降的如空气的温度升降的那样快。因此沿海地区的气候受海洋影响较大, 冬天不会很冷, 夏天也不会太热。

**风雨的故乡** 海水中的水要蒸发, 就要吸收热量。水蒸气上升到空中聚集起来, 温度降低时冷凝成水, 成雪或霜, 降落到陆上或回到海洋中, 所以海洋对全球的水汽平衡起重要作用。可以说, 海洋是风雨的故乡, 它才能真正的“呼风唤雨”。

① vapor: n. 水汽, 水蒸气, 无实质之物 vi. 蒸发, 自夸 vt. 使蒸发 n. 自夸者

② condense: v. (使)浓缩, 精简

③ droplet: n. 小滴

④ precipitation: 仓促 precipitation rain fall n. 雨量

⑤ sleet: n. 冰雨, 雨夹雪 vi. 下雨雪, 下冰雹



In fact, we can say oceans and seas are the “homeland” of rain and weather. They can “control the forces of nature”.

**Ice in the Oceans.** Icebergs, floating icebergs that exist near high latitude<sup>①</sup> (polar regions) are danger to the explorers in that area. Floating icebergs frost when temperature falls so big ships can not move. This is how icebergs are formed. Icebergs are very huge, usually floating in the oceans because of their density. They come from the rivers on land. One third of the icebergs are above sea surface while two thirds are below. So they are all - conquering forces and hazard to ships. They are the main factor that created the “Titanic” tragedy.

**The Pacific Ocean——The Largest of the World's Four Oceans.** The Pacific Ocean looks rotundity<sup>②</sup>. It is the body of water between Asia, Australia, Antarctica<sup>③</sup>

**海冰** 还值得一提的是海冰, 这种一般出现在高纬度地区(像极地)的冰山、流冰等, 是极地探险工作的劲敌。这些浮冰在风平浪静气温再降低时又冻结起来, 航行于其中的船只将无法行动, 而陷于冰原中。这是浮冰的形成过程。而冰山主要来自陆地上河流, 冰山往往巨大, 由于密度关系, 浮在水面上, 水面以下的体积是上部的2倍, 所以一座巨大的冰山往往产生无坚不摧的力量, 令避之不及的船舶遭遇噩运。这也是导致“泰坦尼克号”等悲剧产生的重要因素。

**世界最大的大洋——太平洋** 太平洋水平轮廓近似圆形, 位于亚洲、大洋洲、南极洲和美洲之间, 面积17 968km<sup>2</sup>, 占世界海洋总面积的49.8%,

① latitude: n. 纬度, 范围, (用复数)地区, 行动或言论的自由(范围)

② rotundity: n. 球状, 圆形

③ Antarctica: n. 南极洲



and America. With an area of 17 968km<sup>2</sup>, it covers 49.8% of the ocean area. The average depth of it is 4028m. It is the largest, deepest ocean with most islands and coral<sup>①</sup> reef. It is also the ocean with the highest water temperature and a zone of violent volcanic<sup>②</sup> and earthquake<sup>③</sup> activity.

Several continents enclosed the Pacific Ocean. But it is connected to other oceans through straits. These straits includes Bering Strait<sup>④</sup> which connects Arctic<sup>⑤</sup> Ocean in the north, Strait of Malacca<sup>⑥</sup> and Sunda Strait<sup>⑦</sup>, Lombok Strait<sup>⑧</sup> which connect Indian Ocean in the south - west and Drake Passage<sup>⑨</sup> that connects Atlantic Ocean in the

平均深度 4028m, 是世界上面积最大、最深和岛屿、珊瑚礁最多的大洋, 也是火山地震频繁和水温最高的大洋。

太平洋的四周有大陆环绕, 但是又通过海峡与其他大洋相通, 北部通过白令海峡与北冰洋相通, 西南部通过马六甲海峡、巽它海峡、龙目海峡与印度洋相通, 东南部通过德雷克海峡与大西洋相通。



① coral: n. 珊瑚, 珊瑚虫

② volcanic: adj. 火山的, 象火山的, 猛烈的, 易突然发作的, 爆发的  
n. 火山岩

③ earthquake: n. 地震, [喻]在震荡, 在变动

④ Bering Strait: n. 白令海峡(西伯利亚和阿拉斯加间的海峡)

⑤ Arctic: adj. 北极的, 北极区的 n. 北极, 北极圈

⑥ Strait of Malacca: 马六甲海峡

⑦ Sunda Strait: 巽它海峡

⑧ Lombok Strait: 龙目海峡

⑨ Drake Passage: 德雷克海峡

south - east.

There are about 10 000 islands and islets <sup>①</sup> in the Pacific Ocean. These islands scattered mainly in the west and southwest. Among the 2000 large ones, the most famous include Irian <sup>②</sup>, Sumatera <sup>③</sup>, Honshū <sup>④</sup>, South Island <sup>⑤</sup>, North Island <sup>⑥</sup>, Java <sup>⑦</sup>, Luzon <sup>⑧</sup>. Seas around the Pacific Ocean are Sea of Okhotsk <sup>⑨</sup>, Sea of Japan, Yellow Sea, East China Sea, South China Sea, Java Sea, Coral Sea, Tasman Sea, and other tributary <sup>⑩</sup> water bodies.

**The Atlantic Ocean — The Growing Ocean.** The Atlantic Ocean is located between Europe, Africa, America and Antarctica. It

太平洋约有岛屿 1 万多个; 主要分布在太平洋西部和西南部, 其中较大的岛屿 2000 多个, 以伊里安岛、苏门答腊岛、本州岛、南岛、北岛、爪哇岛、吕宋岛等最为著名。太平洋的边缘海主要有: 鄂霍次克海、日本海、黄海、东海、南海、爪哇海、珊瑚海、塔斯曼海等。

处于成长期的大洋——大西洋 大西洋位于欧洲、非洲、美洲和南极洲之间, 东西狭窄, 南北延长, 呈 S 形。大西洋面积



① islet: n. 小岛

② Irian: 伊里安岛

③ Sumatera: 苏门答腊

④ Honshū: n. 本州(日本最大的岛屿)

⑤ South Island: 南岛

⑥ North Island: 北岛

⑦ Java: n. 爪哇

⑧ Luzon: n. 吕宋岛(菲律宾主要岛屿)

⑨ Okhotsk: n. 鄂霍次克海(太平洋西北部边海)

⑩ tributary: adj. 附庸的, 从属的, 辅助的, 支流的 n. 进贡国, 附庸国, 支流



is long from south to north but narrow from west to east. It looks like the letter S. It covers an area of 93.363 million km<sup>2</sup> with an average depth of 3627m. In the southeast it connects the Indian Ocean through Cape Agulhas<sup>①</sup>, in the southwest the Pacific Ocean through Cape Horn<sup>②</sup> which is around 67° on the longitude west. Research work of geologists shows that Atlantic Ocean is in its middle age. It is the Ocean that grows wider.

With the equator as the center-line, North Atlantic Ocean has a zigzag<sup>③</sup> coastline and has many seas around it, such as Mediterranean Sea<sup>④</sup>, Black Sea and North Sea; It also has many gulfs, straits and peninsulas, like Strait of Gibraltar<sup>⑤</sup> (Morocco<sup>⑥</sup> — Spain),

9336.3 万平方千米, 平均深度 3627m。大西洋东南部以通过非洲南端厄加勒斯角的东经 20° 经线为界与印度洋相邻, 西南以通过南美南端的合恩角的西经 67° 经线与太平洋相邻。地质学家研究表明, 大西洋正处于其演化的壮年期, 是目前仍在开裂成长的大洋。

以赤道为界, 北大西洋岸线曲折, 多边缘海、内海, 如地中海、黑海、北海等; 也有海湾、海峡和半岛等, 如直布罗陀海峡、墨西哥湾、英吉利海峡、西西里岛、大不列颠岛、爱尔兰岛、冰岛、格陵兰岛、斯堪的纳维亚半岛、意大利半岛。南大

① Cape Agulhas: 厄加勒斯角

② Cape Horn: 合恩角

③ zigzag: n. Z 字形, 蜿蜒曲折 adj. 曲折的, Z 字形的 adv. 弯弯曲曲地 v. 成 Z 字形,

④ Mediterranean Sea: n. 地中海 (位于欧, 亚, 非三大洲之间)

⑤ Strait of Gibraltar: n. 直布罗陀海峡

⑥ Morocco: n. 摩洛哥

