BOGOROV, B., Inst. Oceanology, AS USSR

"Perspectives in research of life cycles and the generation quantity of plankton in any geographical latitude," a paper submitted at the International Union of Biological Sciences Symposium on Perspectives in Marine Biology, La Jolla, California, 24-31, Mar '56.

SO: E-982

BOGOROV, V.G.

Research on the expeditionary ship "Vitiaz'" in the Pacific Ocean. Izv.AN SSSR.Ser.geog. no.2:3-5 Mr-Ap '56. (MLRA 9:8)

1. Institut okeanologii AN SSSR.
(Pacific Ocean--Oceanographic research)

BOGOROV, V., professor.

The White Sea. Blok.agit.vod.transp. no.5:18-23 Mr '56. (MLRA 9:8)
(White Sea)

Bogorov, V.G.

BOGOROV, V.G.; DOBROVOL'SKIY, A.D.

Oceanographic research in the Chinese People's Republic. Izv. AN SSSR Ser. geog. no.2:137-142 Mr-Ap '57. (MIRA 10:12)
(China--Oceanography)

BOGOROV, V.G.; ZENKEVICH, L.A.; RASS, T.S.

The world's oceans and their resources. Izv. AN SSSR. Ser. geog. no.5:39-49 S-O '57. (MIRA 11:2)

(Oceanography)

Bogorov V.G.

25-10-13/41

AUTHOR: Bogorov, V. G., Doctor of Biological Sciences, Professor

TITLE: The Expanse of World Oceans (V prostorakh mirovogo okeana)

PERIODICAL: Nauka i Zhizn', 1957, # 10, pp 33-35 (USSR)

ABSTRACT: During the international Geophysical Year the Soviet Union will carry out its research in the northern part of the Pacific Ocean (from 50 degrees northern latitude to the equator), the northern part of the Atlantic Ocean, in the Antarctic and in the Arctic Seas. Already in 1953/54 the Soviet Expedition organized by the Institute for Oceanography of the Academy of Sciences of USSR on the "Vityas'" studied the western areas of the Pacific Ocean and established that the representation of the Tuskarora depression on the map in the form of a round spot is not correct but that it is a narrow chink stretching for about 2,000 km along the Kuril Islands and South Kamchatka, and that its maximum depth amounts to 10 km (not 8,513 m as formerly given by an American scientist). Moreover, the existence of simple organisms was discovered in these depths, which disproves former scientific assertions that life is not possible beyond a depth of 6 km. It was also disclosed that the Marian depression with 10,863 m is the deepest in

Card 1/2

the Pacific and not the Philippine depression.

In April 1957 a test expedition was organized by the Institute for Oceanography of the USSR Academy of Sciences headed by N. N. Sysoyev. The first Soviet expedition of the International Geophysical Year was started on 1 July 1957 on board of the ship "Vityas'" under the leadership of Professor A. D. Dobrovol'skiy. The region to be studied stretches from Eastern Japan to the 180th degree of longitude and from the Kuril Islands to New Guinea. During the first three months, unknown submarine mountains have already been discovered, the circulation of the various currents and streams has been studied, the waters and sea bottom have been investigated chemically. Special attention was paid to the research of living organisms. A seismic-acoustic method was applied to determine the layer of sea bottom sediments.

There are three sketches.

AVAILABLE: Library of Congress

Card 2/2

USSR/General Biology - General Hydrobiology. B.

Abs Jour : Ref Zhur - Biol., No 21, 1958, 94728

Author : Bogorov, V.G.

Inst : Institute of Oceanography AS USSR

Title : Standardization of Marine Plankton Investigations.

Orig Pub : Tr. In-ta okeanol. AN SSSR, 1957, No 24, 200-214

Abstract : A discourse is given on the most extensive methods and instruments for collection of plankton groups of different dimensions and the most effective methods of treating the collected material. The quantitative methods described are recommended as standards for the study of plankton. Tables are appended with standard weights of mass species of plankton animals in the Barents, Bering and Okhotsk Seas. -- N.O. Kashkin.

Card 1/1

BOGOROV, N. G. and KREPS, E. M.

"Discharging Radioactive Waste Into Deep-Water Ocean Depressions."

paper tobe presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 1958.

BOGOROV, V. G. and VINOGRADOV, M. Ye.

Distribution of Zooplankton in the Northwestern Part of the Pacific Ocean.
The article examines the problem of plankton distribution in connection with concentrations of fish and ~~ix~~ discusses the possibility of pronostication. (p. 100-121)

Oceanographic Research of the Northwestern Part of the Pacific Ocean, Moscow, Izd.-vo AN SSSR, 1958, 148 p. Its: Trudy, t.3. (TRUDY Ocean Kom. 3)

This collection of articles reports the results of observationsf made in the Pacific by the Institute of Oceanology fo the Academy of Sciences, USSR. In 1949, the Institute launched a systematic five-year program of scientific exploration of certain hydrographic peculiarities of the Soviet Pacific Area. The operations were carried out as a "Complex Oceanographic Expedition," using the Motorboat Vityaz' as its base. The Expedition worked in collaboration with the hydrographic Institute of the Soviet Navy (VMS), the Pacific Institute of Piscatology and Oceanography, and some 40 other institutes of the Academy of Sciences. Between 1949 and 1954, 18 trips were made, covering about 130,000 miles. Among the subjects of direct concern were: Meteorology, hydrology, oceanography, hydrochemistry, sedimentation, geography of the littoral, geology and contours of the sea bottom, fauna, plankton, microbiology, and gravimetry. Twenty-eight authors contributed to the collection which consists of 27 articles. There are: 6 gables, 23 diagrams, 3 illustrations (photographs of the littoral), 4 maps. There are no references.

Research of the Northwestern Part of the Pacific Ocean, Moscow, Izd-vo AN USSR, 1958.

BOGOROV, V. G.

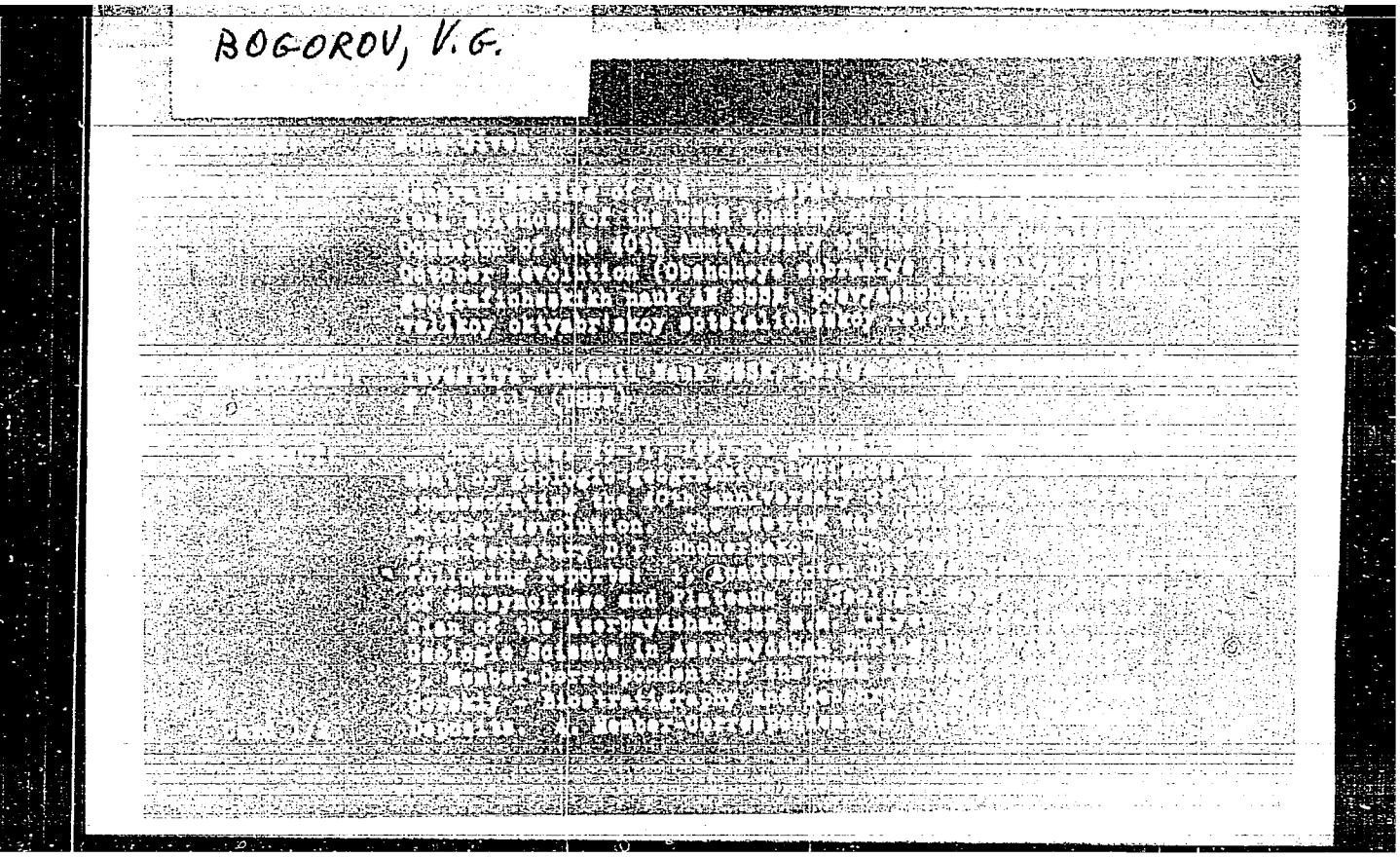
"The Qualitative and Quantitative Distribution of Ground- and Plankton Organisms."

report presented at the All-Union conference on Biological Foundations of Ocean Fishing, 11-16 April 1958, by Ichthyological Committee of AS USSR, VNIRO, and Inst. Oceanography, AS USSR.
(Vest. AN SSSR, 1958, No. 7, pp. 131-133)

BOGOROV, V.G.

Recommendations for the standardization of plankton sampling during the International Geophysical Year. Biul. Okean. kom. no.1:49-51 '58. (MIRA 11:9)

1. Institut okeanologii AN SSSR.
(Plankton) (International Geophysical Year, 1957-1958)



APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000205930008-4"

AUTHOR: Bogorov, V.G., Professor

26-58-2-37/48

TITLE: The First Oceanological Ship of the KNR (Pervoye okeanologicheskoye sudno KNR)

PERIODICAL: Priroda, 1958, Nr 2, p 115 (USSR)

ABSTRACT: The Morskoy biologicheskiy institut Akademii nauk KNR (Marine Biological Institute of the Academy of Sciences of the Chinese People's Republic) has received a 1,000-ton sea tug with a speed of 12 mph and re-equipped as an expedition ship. It has been named "Venera" and has 5 laboratories and cabins for 40 scientific workers. In 1957, the ship carried out research in the China Sea and the Bokhay Sea.

ASSOCIATION: Institut okeanologii Akademii nauk SSSR, Moskva (Institute of Oceanology of the USSR Academy of Sciences, Moscow)

Card 1/1 1. Oceanography--China sea 2. Ships--Applications

BOGOROV, V. G.

In the Department of Geological-Geographical Sciences 30-58-5-13/36
Vest Ak Nauk SSSR, No. 5, 1958, p. 56-59
of oceanology.

Then the detailed report of Professor V. G. Bogorov on the results of the 26-th voyage of the expeditionary vessel "Vityaz" was heard which had according to the plan of the International Geophysical Year been entrusted with the investigation of the central part of the Pacific Ocean. During the visit of the ship in the harbors of Suva (Fiji Islands), Wellington (New Zealand) and Numea (New Caledonia) the Soviet scientists made themselves acquainted with the scientific work of their English, New Zealand and French colleagues. Scientific conferences were held with the oceanologists of New Zealand, as well as with the French at Numea. N. S. Shatskiy, Member, Academy of Sciences, USSR and S. V. Obruchev, Corresponding Member, Academy of Sciences, USSR appreciated the researches of the "Vityaz" as an important achievement of Soviet science.

1. Scientific research--USSR 2. Geology--USSR 3. Geography--USSR

card 1/1

SOV/169-59-6-5724

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 6, p 44 (USSR)

AUTHOR: Bogorov, V.G.

TITLE: The Second Expedition on the "Vityaz'" in Connection With the IGY Program

PERIODICAL: Mezhdunar. geofiz. god. Inform. byul., 1958, Nr 5, pp 78 - 81

ABSTRACT: Comprehensive explorations of the central part of the Pacific Ocean have been carried out during the period from November 5, 1957, to February 27, 1958. The zonal distribution of the oceanological characteristics and the depth water circulation have been studied. The following observations were carried out: 1) physical observations for studying the solar radiation, the distribution of temperature and moisture of the air, the characteristic motions of air masses, the structure and dynamics of water masses, the water circulation, the heat content of water, the optical properties of water, and geophysical characteristics of the Earth's crust under the bottom of the ocean;

Card 1/2 2) chemical observations for studying the chemical properties

SOV/169-59-6-5724

The Second Expedition on the "Vityaz'" in Connection With the IGY Program

of water and ooze, the radioactivity of water, sediments, animals, and the balance of carbon dioxide content; 3) geological observations for studying the relief of the bottom, sediments, suspensions in water and air, and geochemical characteristics; photographs of the bottom of the ocean were made; 4) comprehensive biological investigations. The main research work was carried out in the region along 172°W.long. from 33°n.lat. to New Zealand and along 172° e.long. from New Zealand to 30° n.lat. Comprehensive studies of the Tonga, Kermadek and New Hebrides depressions were performed. A new depression was discovered, extending in western direction from the area north of the Fidji Islands. Investigations were performed into variations of boundaries of trade-wind and inter-tradewind currents in the southern and northern hemispheres. When landing in Wellington, a conference was held for acquainting with the work of the "Vityaz'".

V.M. Lifshits

Card 2/2

SOV-26-58-8-12/51

AUTHOR: Bogorov, V.G., Associate Member of the USSR Academy of Sciences

TITLE: On Board the "Vityaz'" in the Central Part of the Pacific (Na "Vityaze" v tsentral'noy chasti Tikhogo okeana)

PERIODICAL: Priroda, 1958, Nr 8, pp 66-73 (USSR)

ABSTRACT: From November 1957 to February 1958, the Soviet expedition ship "Vityaz'" conducted research work in the Central Pacific. The expedition lasted 115 days and covered 17,425 miles. The scientific and auxiliary team consisted of 70 people. The "Vityaz'" is a 5,500-ton research ship with 12 laboratories. She is equipped with 12 winches, among them a trawler winch permitting the trawling in the greatest depths and an anchor winch for anchoring at depths exceeding 11 km. Investigations were made in the passate and interpassate zones. The Tonga and Kermadek depressions were investigated at the end of December and the beginning of January. The Soviet oceanologists now have material available on 14 depressions of the 18 in the Pacific. In Wellington, New Zealand, a scientific conference was convened by the scientists of the "Vityaz'" together with scientists from New Zealand in which 12 papers

Card 1/2

On Board the "Vityaz'" in the Central Part of the Pacific

were presented. During the expedition, 25 hydrological series from the bottom and 96 from the 2,000 m level were investigated. The geologists took 41 mud samples, made 16 photographs of the bottom, and 29 explosions for determining the structure of the ocean bottom by seismo-acustic methods. Plankton from the bottom was taken in 16 cases and from 500 m in 97 cases.
There are 12 photos and 1 map.

ASSOCIATION: Institut okeanologii Akademii nauk SSSR (Institute of Oceanology of the USSR Academy of Sciences)

1. Pacific Ocean--Oceanography 2. Ocean bottom--Sampling
3. Marine biology--Pacific Ocean 4. Seismic waves--Applications

AUTHORS: Bogorov, V.G., Kreps, Ye.M., Member Correspondents of the AS USSR SOV-26-58-9-7/42

TITLE: Is it Possible to Bury Radioactive Wastes in the Deep-Water Trenches of the Ocean? (Vozmozhno li zakhoroneniye radioaktivnykh otkhodov v glubokovodnykh vpadinakh okeana)

PERIODICAL: Priroda, 1958, Nr 9, pp 45-50 (USSR)

ABSTRACT: According to the authors' opinion, the problem of the disposal of radio-active wastes has not yet been studied sufficiently. The suggestion to bury radioactive wastes in one or several of the 19 deep-water ocean trenches is considered. The Tonga trench investigated in 1952/53 by the American research vessel "Capricorn" and in 1957/58 by the Soviet "Vityaz'" is taken for an example. It is described with respect to its bottom relief, distribution of temperature, salinity and water density, conditions characterizing the processes on the trench bottom (tables 1 - 3), based partly on work by A.N. Bogoyavlenskiy and L.A. Zenkevich of the Institut okeanologii (Institute of Oceanology). The ensuing discussion of water circulation in a given part of the ocean and the mixture of

Card 1/2

Is it Possible to Bury Radioactive Wastes in the Deep-Water Trenches of the Ocean? SOV-26-58-9-7/42

diverse waters is partly based on N.N. Zubov's investigations. The authors conclude that the radiation wastes will get into the general circulation of the upper water layers comparatively quickly and enter the organisms of plants, animals, fish and mammals there and consequently affect man dangerously. There are 2 diagrams, 3 tables and 8 references, 3 of which are Soviet, 3 American and 2 English.

1. Radioactive waste--Disposal

Card 2/2

AUTHOR: Bogorov, V. G. 20-118-5-19/59

TITLE: The Production of Plankton and the Characteristic of the Biographic Regions of the Ocean (Produktsiya planktona i kharakteristika biograficheskikh oblastey okeana)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 5, pp. 917-919 (USSR)

ABSTRACT: According to data of several authors the primary production is very different in different regions of the ocean. The determination by sections of the primary production is of utmost importance. The expedition of the Institute for Oceanology of the AS USSR in 1954 (on board the ship "Vityaz") determined the production of the carbon produced during the photosynthetic activity of the phytoplankton by means of the oxygen method. This expedition worked in the northwestern part of the Pacific. The border between the boreal and the tropical area goes through this district at about 40° of north latitude. The perceptible composition of the plankton is modified in this region to a great extent. North of 40° of north latitude there are typically boreal species living in the plankton of the surficial layers, the names of some

Card 1/3

of them are given here. South of 40° and especially of 35° of north latitude the plankton contains mainly tropical species. The amount of the living plankton is highly different from district to district, the author here gives numerical data for the different districts. Towards south the production of carbon decreases and in the warm waters of Kurosio the production of carbon is ten times smaller than in the zone of intensive growth of plankton. The production of carbon and the amount of the living zooplankton on an average in boreal waters is ten times as high as in tropical waters. The differences are mainly conditioned by the decreased possibility of primary production (especially by the intermixture of the waters, by the dynamics of nutrients for the phytoplankton etc.). The decrease of the amount of living plankton also lowers the possibilities of nourishing fishes and whales . The primary production determines the possibilities of nourishment not only for surface layers but also for the whole depth of the ocean. The borders of propagation of the different plankton masses are somewhat different from season to season and from year to year. The primary production, the distribution of the amount of the living plankton and of the fishes are closely correlated. The results here ob-

tained can additionally be used as follows: The districts of the ocean with raised concentration of organic matter in the sludge give evidence of a rich life in the upper layers of the water. Consequently the possible borders of the distribution of planktophagies among the fishes and whales prevailing in the trade can be plotted into the soil map. Moreover the things reported here ought to be of interest for geologists of mineral oil. There are 4 figures and 5 references, 5 of which are Soviet.

ASSOCIATION: Institut okeanologii Akademii nauk SSSR (Institute of Oceanography, AS USSR)

PRESENTED: October 8, 1957, by S. I. Mironov, Member, Academy of Sciences, USSR

SUBMITTED: October 4, 1957

BOGOROV, V. G., TAREYEV, B. M. and FEDOROV, K. M.

The Depths of the Ocean and the Problem of Waste Disposal Therein."

report presented at the Scientific Conference on the Disposal of Radioactive Wastes, Monaco, 16-21 November 1959.

BOGOROV, V. G.

PHASE I BOOK EXPLOITATION SOV/5084

International Conference on the Peaceful Uses of Atomic Energy. 2d, Geneva, 1958.

Doklady sovetskikh uchenykh. [t.4] Khimiya radioelementov i radiatsionnykh prevrashcheniy (Reports of Soviet Scientists. v. 4.: Chemistry of Radioelements and Radiation Transformations) Moscow, Atomizdat, 1959. 323 p. 8,000 copies printed. (Series: Its: Trudy)

Ed. (Title page): A. P. Vinogradov, Academician; Ed.: V. I. Labaznov; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This collection of articles is intended for scientists and engineers interested in the applications of radioactive materials in science and industry.

COVERAGE: The book contains 26 separate studies concerning various aspects of the chemistry of certain radioactive elements and the processes of radiation effect on matter. These reports discuss present-day methods of reprocessing irradiated nuclear fuel, research in the chemistry of mercury, thorium, uranium, plutonium, and americium, problems related to the sorption and burying of radioactive wastes, the radiolysis of aqueous solutions and of organic compounds, the mechanism of polymer chain grafting, and the effect of radiation on natural and synthetic rubbers. V. N. Prusakov edited the present volume. Most of the reports are accompanied by references. Contributors to individual investigations are mentioned in annotations to the Table of Contents.

TABLE OF CONTENTS:

(3/)

BOGOROV, V.G.; BRUYEVICH, S.V.; FEDOSOV, M.V.; UDINTSEV, G.B.

Methods of oceanographic research in the U.S.S.R. Nek. probl. i rez. okean. issl. no.1:12-16 '59. (MIRA 13:2)
(Oceanographic research)

AUTHOR: Bogorov, V.G., Corresponding Member, AS USSR SOV/26-59-1-18/34

TITLE: The Achievements of Soviet Oceanography (Dostizheniya sovetskoy okeanologii)

PERIODICAL: Priroda, 1959, Nr 1, pp 43 - 45 (USSR)

ABSTRACT: The author gives a brief survey of recent Soviet oceanographical research. He enumerates some of the fields covered by various marine expeditions in the Arctic, Pacific and Antarctic Oceans, including deep-sea water circulation(almost 10 times faster than that of the surface waters at depths of a few hundred meters) geographical zonation, deep-sea precipices, the continental shelf in the Antarctic region, animal and plant life, and the factors important to weather forecasts. The research vessels "Vityaz'" and "Ob'" played an important part in marine research in the Pacific Ocean. The whaling fleet "Slava" is intensely engaged in plankton research. Its annual reports will be decisive for the assignment of two new Soviet whaling flotillas in the Antarctic

Card 1/2

ocean. The study of coastal lines, under the effect of the building and destroying forces of the sea, yielded important data necessary for the establishment of ports and harbors. The results will be of interest not only to the USSR but also to Poland and Red China. Research stations on drift-ice floes in the Arctic Ocean gave valuable information on water circulation and other conditions. The combined effort of Soviet oceanographical research has demonstrated that any layer of the world's oceans can be of great economic importance. In 1959, the entire northern part of the Pacific Ocean up to American waters will be studied. Complex research will be conducted in the Indian Ocean. Large research teams will work on the "Ob'" and "Lomonosov" research vessels during their meridional crossing of the Atlantic Ocean. There is 1 photo.

ASSOCIATION: Institut okeanologii AN SSSR /Moskva (The Institute of Oceanography of the AS USSR, Moscow)

BOGOROV, V.G.

The indivisible nature of the ocean. Vest.Mosk.un.Ser.biol., pochv., geol., geog. 14 no.4:201-207 '59. (MIRA 13:6)

1. Kafedra geografii polyarnykh stran.
(Oceanography)

SOV/10-59-5-15/25

AUTHOR: Bogorov, V.G. and Dobrovol'skiy, A.D.

TITLE: Oceanographic Research in North Korea

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959, Nr 5, pp 101-103 (USSR)

ABSTRACT: The third plenary session of the International Commission on the Fishing Industry, Oceanological and Limnological Research in the western part of the Pacific Ocean took place in August 1958 in Pyongyang. The authors give neither the composition nor the aims of the Commission. A short description of the organization of scientific research is given. The study of the seas is carried out by two scientific research institutes, the Institute of the Western (Yellow) Sea in Chosan and the Institute of the Eastern (Japanese) Sea in Wonsan. The study of the sea is also carried out by the Central Meteorological Observatory in Pyongyang. All these institutions were organized with the

Card 1/2

Oceanographic Research in North Korea

help of the Soviet Union, especially by the Tikhookeanskiy Institut rybnogo khozyaystva i okeanografii (The Pacific Ocean Institute of the Fishing Industry and Oceanography) (TINRO). Soviet text books are also used in the institutes, namely those by N.N. Zubov, V.V. Shuleykin, V.A. Snezhinskiy, and G.R. Zhukovskiy (his book "Oceanography" has already been translated into Korean).

ASSOCIATION: Institut okeanologii AN SSSR (Institute of Oceanology of the AS USSR)

BOGOROV, V.G.

Depths of the ocean and their life. Geog.v shkole 22 no.5: 41-46 S-O '59. (MIRA 13:2)
(Oceanography)

3 (9)

AUTHOR: Bogorov, V. G., Corresponding Member AS USSR SOV/20-128-4-51/65

TITLE: The Biological Structure of the Ocean

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 819-822 (USSR)

ABSTRACT: In a paper with the same title as above L. A. Zenkevich developed in 1948 the concepts of the symmetry of the distribution of life along the meridian and the parallels. The most recent successful research of the ocean yielded new data in this field and an enlargement of the concept of the peculiarities of the biological phenomena in different geographical zones. This confirmed the theoretical topic of the quantitative plankton distribution according to the geographical latitudes (Ref 6). The author used as material the yield of the ship "Vityaz'" which crossed the central part of the Pacific in meridional direction from November 1957 till February 1958 (174° western longitude and 172° eastern latitude). A space of 40° of northern latitude up to 40° southern latitude was investigated (Ref 4). The following zones are well marked for the surface water in the central part of the Pacific:

Card 1/4

northern semitropical, northern trade-wind zone, inter-trade-wind zone, southern trade-wind zone, and southern semitropical one. The number of geographical zones is different for the upper and lower water layers. There are less zones at a greater depth, and only one tropical zone exists on the bottom. Conditions favoring life to a different degree are established in consequence of the special types of interrelations between the physical, chemical, biological, and geological processes characteristic of individual zones. Figure 1 shows the interrelations for the pelagic surface layer. This shows that the largest plankton quantities occur in the northern part of the northern semitropical zone, in the inter-trade-wind zone, as well as in the southern part of the southern semitropical zone. The phosphate quantity is here the highest, too. The biomass of the pelagic fishes reproduces naturally the variation character of the plankton biomass. The chain of processes governed by a certain rule, which take place in the photo-synthesizing layer influences the distribution of life in the entire depth of the ocean (Fig 2). The impoverishment of the plankton at the surface leads to the same phenomenon in the depth. Since the deep layers in the semitropical zones are not

only enriched by the sinking of surface waters, but also by an active importation of plankton, detritus, and other nutritive substances from the moderate regions of the northern and southern hemisphere (Refs 1, 5) the curves of the plankton biomass have a characteristic curved shape. Little plankton is produced in the tropical zone. The benthos in the tropics is insignificant since plankton and its remains are the only direct or indirect source of nourishment of the animals at the bottom far away from the shore. This was completely confirmed by the determination of its biomass by Z. A. Filatova, G. M. Belyayev, and N. G. Vinogradova (Fig 2). The development of the chain of interrelations takes a quite different course in the trade-wind zones. The current caused by the winds leads to a rise of the waters off the American coast. This causes many nutritive salts to be transported to the surface. Therefore a considerable quantity of plankton is produced here (Ref 7) and, consequently, the waters are abounding in fish. Plankton, fish, and birds decrease in the western direction. Finally the seasonal differences in the plankton quantity are discussed with respect to growing distance from the equator. Figure 3 shows the block scheme of

the biological structure of the Pacific. There are 3 figures and 7 references, 6 of which are Soviet.

ASSOCIATION: Institut okeanologii Akademii nauk SSSR (Institute of Oceanography of the Academy of Sciences, USSR)

SUBMITTED: July 2, 1959

BOGOROV, V. G.

"Geographic Zonality of the Biological, Physical, and Chemical Phenomena and processes in the Ocean"

report to be submitted for the Intl. Geographical Union, 10th General Assembly and 19th Intl. Geographical Congress, Stockholm, Sweden, 6-13 August 1960.

S/010/60/000/004/002/006/XX
A053/A026

AUTHORS: Bogorov, V.G.; Tareyev, B.A.

TITLE: Oceanic Depths and the Problem of Dumping Radioactive Waste

PERIODICAL: Izvestiya Akademii nauk SSSR, seriya geograficheskaya, 1960, No. 4, pp. 3 - 10

TEXT: The authors refer to the recommendation given by V.G. Bogorov and Ye.M. Kreps at the II International Conference on the Peaceful Utilization of Atomic Energy in Geneva in September 1958, to the effect that the dumping of radioactive waste in depths of the ocean should not be permitted. In this article the authors furnish new proof in favor of their viewpoint based on the latest observations made by Soviet and foreign oceanologists, in particular on the occasion of the Danish expedition on the SS Galatea in 1952 and the Soviet expedition on the SS Vityaz' in 1958. The article compares the 23 deepest depressions in the Pacific, the Atlantic and the Indian Ocean, in indicating maximum depths and their location. It also gives information on the prevailing temperatures at various depths ranging from 0 to 10,000 m in different areas and at different seasons. These temperatures even at maximum depths are subject to variations

Card 1/4

Oceanic Depths and the Problem of Dumping Radioactive Waste

which permits to conclude that nowhere the water is stagnant but constantly on the move, however slow this movement may be in certain places. The vertical movement of the water in the depths of the Philippine and the Bougainville depressions have been calculated as being $10^{-4}cm^2/sec$ or about 30 - 50 m per annum. The speed of horizontal movement of ocean water as a rule exceeds by far that of vertical movement, particularly in the upper layers. The article refers to investigations carried out in recent years pertaining to depth circulations, mentioning the findings of Doctor Swallow and of Doctor Laughton. The article cites a number of other phenomena, which all tend to prove the movement of water, resulting in a continuous agitation and mixing process, which creates favorable conditions to the development of life, even down to the greatest oceanic depths. During deep-sea trawling of the Vityaz'in 1958 in the Pacific, going down to a depth of 10,700 m, the existence of fauna was revealed even in these ultraabyssal depths, consisting of sponges, worms, mollusca, etc, though in small quantities, because at a distance of 10 km from the photosynthetizing layers only very little food is brought down. Life in the mass of water is in a state of constant migration. Even plankton covers considerable distances. The migration of ani-

Oceanic Depths and the Problem of Dumping Radioactive Waste

mals and biocirculation are a powerful means of transportation of all kinds of substance including absorbed radioactivity. Harley found that in a district west of the Bikini Atoll radioactivity of plankton was 470 times greater than elsewhere in the ocean. Japanese authors state that as a result of radioactive fallout infected fishes were found near the Marshall Islands, later on near the Caroline Islands and further north near Taiwan and the Bonin Isles. Fishes caught within a radius of 3,000 km of the district of Bikini had to be destroyed on account of their radioactivity. This district being the spawning place of tuna and swordfish, it is likely that its contamination by radioactive fall-out will be of far-reaching consequences in the way of infected tunafish, in which connection the authors refer to the findings of the Japanese scientists Y. Miyake and Y. Suguira. Interesting in this respect is also the theory developed by R.H. Ketchum and T.V. Bowen concerning the physical and biological transfer of different substances, concluding that biological transfer often exceeds the role of the physical mixing process. In respect to biocirculation a great deal of research work remains yet to be done, especially in deep-water circulation, although it is known that big plankton migrates in deep layers (down to 6 km). Thus radioactive waste buried in the depth of the ocean, when dissolved will rise

S/010/60/000/004/002/006/XX
A053/A026

Oceanic Depths and the Problems of Dumping Radioactive Waste

by means of physical as well as biological circulation and eventually endanger the life of human beings. The theory that the radioactive substances after a while will be dispersed and in a dissolved state mix with the entire mass of water is ill founded. Water currents are localized and the same refers to biocirculation following a certain cycle. The authors agree with H.T. Dunster that the disposal of radioactive wastes in coastal waters is highly dangerous, and so is the dumping of such wastes in the depths of the ocean. Further investigation and research work should clarify in particular: "The behaviour of radioactive substances in the ocean." - "The accumulation of radioactive substances in marine organisms and their tissues." - "The age of different layers of water and the duration of a certain mass of water remaining in a given layer, types and speeds of mixing processes." - "Speeds of vertical and horizontal circulations of different layers." - "Biocirculation, daily, seasonal, multiannual." - "Geo-chemical factors influencing distribution of radioactive substances". There are 16 references: 9 Soviet, 6 English and 1 Japanese.

ASSOCIATION: Institut okeanologii AN SSSR (Institute of Oceanology, Academy of Sciences, USSR)

BOGOROV, V.G.

Oceanographic research in New Zealand. Biul. Okean. kom. no.5: 42-47 '60. (MIRA 13:10)
(New Zealand--Oceanographic research)

BOGOROV, V.G.

Feeding grounds of fishes and whales in the northwestern part of the Pacific Ocean. Trudy sov. Ikht. kom. no.10:197 '60. (MIRA 13:10)

1. Institut okeanologii Akademii nauk SSSr.
(Pacific Ocean--Plankton)

BOGOROV, V.G.; VINOGRADOV, M.Ye.

Distribution of the biomass of zooplankton in the central Pacific. Trudy Gidrobiol. ob-va 10:208-223 '60.
(MIRA 13:9)
(Pacific Ocean--Zooplankton)

BOGOROV, V.G.

Characteristics of geographical zones in the central part of the Pacific Ocean. Trudy Okean kom. 10 no.4:3-7 '60. (MIRA 14:3)

1. Institut okeanologii AN SSSR.
(Pacific Ocean--Marine biology)

BOGOROV, V.G.; VINOGRADOV, M.Ye.

Distribution of zooplankton in the Kurile-Kamchatka area of the Pacific Ocean. Trudy Inst. okean. 34:60-84 '60. (MIRA 13:10)
(Pacific Ocean--Zooplankton)

BOGOROV, V.G.; DOBROVOL'SKIY, A.D.; PETELIN, V.P.; SERGEYEV, I.V.

First expeditions of the "Vitiaz'" under the program of the International Geophysical Year (cruises 25, 26, and 27). Trudy Inst.okean. 40:3-22 '60. (MIRA 14:8)
(Pacific Ocean--Oceanographic research)

BOGOROV, V.G.

Geographical zones in the pelagic region of the central Pacific; materials of the 26th cruise of "Vitiaz'". Trudy Inst. okean. 41:8-16 '60. (MIRA 13:9)
(Pacific Ocean)

BOGOROV, V.G.

Division of the ocean into biogeographical regions. Vop. geog. no.48:71-89 '60. (MIRA 13:7)
(Pacific Ocean--Zooplankton)

BOGOROV, V.G.

Geographical variation of fatness in ocean plankton. Dokl. AN SSSR 134 no.6:1441-1442 O '60. (MIRA 13:10)

1. Institut okeanologii Akademii nauk SSSR. 2. Chlen-korrespondent AN SSSR.

(Atlantic Ocean--Zooplankton)
(Pacific Ocean--Zooplankton)

BUGOROV, U. G.

Papers submitted for the 10th Pacific Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

AGAPOVA, G. V., BUDANOVA, L. Y., ZATONSKIY, L. K., ZENKEVICH, N. L., IVANOV, A. G., LABINA, N. I., MAROVA, N. A., and UDINTSEV, G. B., All from the Institute of Oceanology, Academy of Sciences USSR - "The bottom relief of the Pacific Ocean and its cartographic representation" (Section VI.A)

ANDRIYASHEV, A. P., Institute of Zoology, Academy of Sciences USSR - "Myctophid fishes of the Antarctic and the problem of their bipolar distribution in the Pacific Ocean" (Section III.C)

ANDRUSHCHENKO, P. F., and SKORNYAKOVA, N. S., Institute of Oceanology - "The manganese concretions of the Pacific Ocean" (Section VII.C.1)

AFN----YEV, G. D. (Name blurred, but may be AFANAS'YEV, G. D.), Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry - (Title of paper is blurred; following is approximate title) - "Mokhoyevishich's discontinuty [sic] layer and petrographic data" (Section VII.C)

BALAKINA, L. M., Institute of Earth Physics imeni O. Yu. Schmidt - "The character of stresses and ruptures in the earthquake foci of the Pacific seismic zone" (Section VII.C.2)

Barsukov BARSUKOV, V. V., Institute of Zoology, "On the Pacific origin of the Anarhichadidae family" (Section III.C)

BATALIN, A. M., Yakutsk State University - "On the heat processes in the waters of the Far East (Section VII.B)

BEKLEMISHEV, K. V., Institute of Oceanology - "On the transformation of the plankton of the Pacific drift and in the adjacent waters" (Section III.C)

BELOUSOV, V. V., and RUDICH, Ye. N., Institute of Earth Physics imeni O. Yu. Schmidt - "Genesis and age of the abyssal depression of the sea of Japan" (Section VII.C.2)

BELYAYEV, G. M., Institute of Oceanology - "Accumulations of squid beaks and shark teeth at the ocean floor" (Section III.C)

BEZRUKOV, P. L., Institute of Oceanology - "Recent sedimentation and the geological history of the Okhotsk sea" (Section VII.C.1)

BEZRUKOV, P. L., LISITSYN, A. P., PETELIN, V. P., and SKORNYAKOVA, N. S., Institute of Oceanology - "Recent sediments of the Pacific" (Section VII.C.1)

BIRSHTEYN, Ya. A., and VINOGRADOV, M. Ye., Institute of Oceanology - "Some specific features in the geographical distribution of abyssal pelagic animals (Amphipoda)" (Section III.C)

BOGDANOV, A. T., Institute of Oceanology - "New charts of cotidal lines and the character of tidal phenomena in the Pacific Ocean" (Section VII.B)

BOGOROV, V. G., BEKLEMISHEV, K. V., and VINOGRADOV, M. Ye., Institute of Oceanology - "The distribution of the zooplankton biomass in the Pacific Ocean" (Section III.C)

BORDOVSKIY, O. K., Institute of Geology Exploitation of Combustible Materials - "The diagenetic changes in bottom sediments from the central part of the Pacific"(Section VII.C.1)

BRODSKAYA, N. G., Institute of Geology - "Sedimentation and the regularities in the distribution of mineral resources in the geosynclinal basins of the Tertiary period in the area of Kamchatka and the Sakhalin Island" (Section VII.C)

BRUYEVICH, S. V., and ZAYTSEVA, Ye. D., Institute of Oceanology - "Some chemical features of sediments and ground solutions permeating the latter in the Pacific (materials of the northwestern part)" (Section VII.C.1)

BUBNOV, V. A., Institute of Oceanology - "A study of equatorial currents in the western Pacific" (Section VII.B)

BURLUTSKAYA, V. M., and SAMOYLENKO, V. S., Institute of Oceanology - "The formation of air masses in the northern part of the Pacific Ocean" (Section VII.A)

BURKOVSKOVA, V. D., Institute of Oceanology - "The regions of formation and transition courses of anti-cyclons in the northern part of the Pacific Ocean (Section VII.A)

BOGOROV, Veniamin Grigor'yevich; SMIRNOVA, N.P., red.; NAZAROVA, A.S., tekhn. red.

[Distant voyages of the "Vitiaz'"] Dal'nie plavaniia na "Vitiaze." Moskva, Izd-vo "Znanie," 1961. 47 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.12, Geologii i geografiia, no.17) (MIRA 14:10)

1. Chlen-korrespondent AN SSSR (for Bogorov).
(Indian Ocean--Description and travel)
(Pacific Ocean--Description and travel)

BOGOROV, V.G.

Fridtjof Nansen's life and work. Izv. AN SSSR. Ser. geog. no.6:101-110 N-D '61. (MIRA 14:12)

1. Institut okeanologii AN SSSR.
(Nansen, Fridtjof, 1861-1930)

BOGOROV, V.G.

Marine research organizations in the Indian Ocean. Okeanologiia 1 no.5:937-939 '61. (MIRA 15:3)
(Indian Ocean--Oceanographic research)

BOGOROV, V.G.; BEZRUKOV, P.L., prof.

"Vitiaz'" in the Indian Ocean. Priroda 50 no.10:88-100 O '61. (MIRA 14:9)

1. Institut okeanologii AN SSSR (Moskva). 2. Chlen-korrespondent AN SSSR (for Bogorov).

(Indian Ocean--Oceanographic research)

BOGOROV, V.G.

Review of the "Trudy" of the White Sea Biological Station of Moscow University. Vol. 1: "Biology of the White Sea". Zool. zhur. 42 no.6:967 '63. (MIRA 16:7)

(White Sea—Marine biology)

BOGOROV, V. G.

"Biological resources in the tropical oceans"

report to be submitted for the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas - Geneva, Switzerland, 4-20 Feb 63.

BOGOROV, V.G., prof.

Petr Ivanovich Usachev, 1892-1962. Trudy Inst. okean. 71:3-4 '63.
(MIRA 16:11)

BOGOROV, V.G.

Nikolai Nikolaevich Sysoev, 1909-1964. Okeanologiia 4 no.4:740-741 '64.
(MIRA 17:10)

BOGOROV, V.G.

Productive regions of the ocean. Trudy VNIRO 57:329-331 '65.
(MIRA 18:6)

L 60995-65 EWT(1) GW

ACCESSION NR: AP5018628 UR/0026/65/000/007/0053/0056

AUTHOR: Bogorov, V. G. (Corresponding member AN SSSR) 24

TITLE: Famous investigator of the depths of the seas. L. A. Zenkevich and his book "Biology of the Seas of the SSSR"

SOURCE: Priroda, no. 7, 1965, 53-56

TOPIC TAGS: oceanography, biological product, biology research

ABSTRACT: This is a review of the book "Biology of the Seas of the SSSR" (awarded a Lenin prize) written by the famous investigator of the oceans, L. A. Zenkevich. The author succeeded in including all the biology of the seas in one volume. The book, resulting from almost 40 years of research work, includes the characteristics of the Baltic, North Atlantic, Caspian, Black, Azov, and North Pacific Oceans. It describes the physicogeographical peculiarities, geological history, water and soil chemistry, the history of the study of the composition of the flora and fauna, and their origins (especially the quaternary history and role of the ice-age). The propagation of the fauna and flora and the biogeography of the seas are discussed in detail. The material concerning the quantitative propagation of life, for which numerical data are given in this article, is of exceptional

Card 1/2

L 60995-65

ACCESSION NR: AP5018628

significance. The multiplication of fish, invertebrates, algae, and sea mammals, as well as the acclimatization permitting the greater utilization of the riches of the seas are discussed in detail. The book contains much general theoretical and concrete material, and the scientific activities of Zenkevich are acknowledged. His special achievement lies in the introduction of the quantitative method for studying the regularities in the distribution of organisms and the productivity of seas and the development of the theory and system of the biological structure of seas and oceans. The awards won by him are listed. Orig. art. has: 1 photograph.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: LS, ES

NO REF SOV: 000 OTHER: 000

Card 2/2

BOGOROV, V.G.

Quantitative evaluation of the animal and vegetable population of an ocean. Dokl. AN SSSR 162 no.5:1181-1183 Je '65. (MIRA 18:7)

1.Institut okeanologii AN SSSR; chlen-korrespondent AN SSSR.

L 13076-66

ACC NR: AP5028916 SOURCE CODE: UR/0020/65/165/003/0686/0689

AUTHOR: Bogorov, V.G. (Corresponding member AN SSSR); Maksimov, V.N.; Fedorov, V.D.

25
B

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Selection of an optimum composition of the medium for the photosynthesis of green serous bacteria Chlorobium thiosulphatophilum using methods of mathematical planning of experiments

SOURCE: AN SSSR. Doklady, v. 165, no. 3, 1965, 686-689

TOPIC TAGS: bacteria, bacteriology, photosynthesis, CHEMICAL COMPOSITION

ABSTRACT: The attainment of a large yield of a given Bacterial culture can be achieved by the proper selection of the optimum medium for the type of organisms under study. Generally, three problems should be solved: 1) select from the totality of n factors only those the concentration of which significantly affects the yield of the culture; 2) establish the optimum qualitative relationships among the selected significant and possibly

Card 1/3 UDC: 576.851.222

2

L 13076-66

ACC NR: AP5028916

interacting factors; and 3) eliminate surpluses in the concentration of nonessential factors with optimum combination of essential components. The optimum composition of the medium for the Chlorobium thiosulphatophilum bacteria was selected by the method of random balance (T.S. Budne, Technometrics, 1, No. 2, 139, 1959). A modified Larsen medium (H. Larsen, J. Bacteriol, 64, 187, 1952) was used as the base. The optimum combination of the selected factors was performed following the method of steepest ascent. After reducing the excess concentrations, the authors obtained an optimum medium, shown in Table 1, yielding 3 times as many bacteria as the Larsen medium.

Table 1. Comparative composition of nutrient media (in mg/l)

	NH_4Cl	KH_2PO^1	$MgCl_2$	NaCl	$CaCl_2$	Na_2S	$Na_2S_2O_3$	$NaHCO_3$	$FeCl_3$ 1-2%
Optimum medium	150	30	100	—	500	1000	8000	8000	25
Larsen medium	1000	250 or 1000)	500	1000	200	1000	or 3000	3000	75

Card 2/3

L 13076-66
ACC NR: AP5028916

Orig. art. has: 2 figures and 4 tables.

SUB CODE: 06 / SUBM DATE: 24Jul65 / ORIG REF: 004 / OTH REF: 003

DR

Card 3/3

BOGOROV, V.G.

Reviews. Bot. zhur. 50 no.5:725 My '65. (MIRA 18:10)

1. Moskovskiy gosudarstvennyy universitet.

BOGOROV, V.G.

Life of the seas of our country. Zem. i vsel. 1 no.4: 2-4 Jl-Ag '65. (MIRA 18:12)

1. Chlen-korrespondent AN SSSR.

BOGOROV, V.G.; MAKSIMOV, V.N.; FEDOROV, V.D.

Selection of the optimal composition of the medium for photosynthetizing green sulfur bacteria (Chlorobium thiosulphatophilum) with the help of mathematical planning of the experiment. Dokl. AN SSSR 165 no.3:686-689 N '65. (MIRA 18:11)

1. Moskovskiy gosudarstvennyy universitet. 2. Chlen-korrespondent AN SSSR (for Bogorov).

L 33449-66 EWT(1) GW
ACC NR: AP6014285 (N) SOURCE CODE: UR/0213/66/006/002/0314/0325

AUTHOR: Bogorov, V. G.; Bordovskiy, O. K.; Vinogradov, M. Ye.

ORG: Institute of Geology and Development of Mineral Fuels (Institut geologii i razrabotki gopyuchikh iskopayemykh); Institute of Oceanology, AN SSSR (Institut okeanologii AN SSSR)

TITLE: Biochemistry of ocean plankton. Distribution of certain chemical components of plankton in the Indian Ocean

SOURCE: Okeanologiya, v. 6, no. 2, 1966, 314-325

TOPIC TAGS: calcium carbonate, carbon, ~~plankton, biomass, phytoplankton~~ SEA WATER, PLANT ECOLOGY, BIOLOGIC ECOLOGY, BIOCHEMISTRY

ABSTRACT: The material for this study was collected by the research vessel "Vityaz'" during the 31st cruise in the Indian Ocean in October 1959 and April 1960. An 0—100 m layer of the ocean floor was sampled. The samples were dried without fixing. Calcium carbonate, organic carbon, and lipide contents were determined. The organic carbon content of the plankton investigated averages 29.9% (ranging from 24.2 to 35.6%) of the dry weight. The lowest plankton carbon content was observed in areas of intensive upwelling where an essential part of the total biomass is composed of phytoplankton (diatoms). Because of the constant relative amount of organic carbon in plankton, its absolute distribution in the upper 100-m layer generally follows rather closely the distribution pattern of the total plankton biomass. The lipide fraction content ranges from 6.4 to 13.6%, averaging 9.4% of the dry weight. Plankton

Card 1/2 UDC: 550.42:517/475(267)

ACC NR: AP6014285 6

is especially rich in lipide where it has maximum concentration. A high correlation between the amount of lipide in plankton and the depth of the upper boundary of the depth of the upper boundary of the thermocline was found. A similarly high correlation exists between the lipide content of the plankton and the temperature at the depth of 100 m. The data obtained lead to the conclusion that an increase or decrease in the lipide content of plankton is closely connected with environmental conditions. The distribution pattern of absolute amounts of lipide follows the general biomass distribution pattern of plankton. The calcium carbonate content averages 11.7% (ranging from 4.8 to 21%) of the dry weight. Comparison of the carbonate content of plankton with the distribution of pteropods and globogerins shows that, apparently, the calcium carbonate content of tropical plankton is determined, first of all, by the amount of globigernis. Orig. art. has: 4 figures and 1 table. [Based on authors' abstract.] [NT]

SUB CODE: 08, 11/ SUBM DATE: 24Dec65/ ORIG REF: 022/ OTH REF: 008

Card 2/2

L 39671-66 GD-2

ACC NR: AP6018143 SOURCE CODE: UR/0020/65/162/005/1181/1183

AUTHOR: Bogorov, V. G. (Corresponding member AN SSSR)

ORG: Institute of Oceanology, AN SSSR (Institut okeanologii AN SSSR) 43

TITLE: Quantitative evaluation of the animal and plant population of the ocean

SOURCE: AN SSSR. Doklady, v. 162, no. 5, 1965, 1181-1183

TOPIC TAGS: biology, oceanography, primitive plant, protozoology, microbiology

ABSTRACT: The pelagic zone of the oceans of the world may be divided into three groups of regions: highly productive - with a plankton biomass in the 0-100 meter layer higher than 100 milligrams per cubic meter; medium-productive - with a plankton biomass in the 0-100 meter layer higher than 50 milligrams per cubic meter; low-productive - with a biomass less than 50 milligrams per cubic meter. Considering new data, the author estimates the total mass of phytoplankton in the world's oceans at 1.7 billion tons and the total mass of zooplankton (without the microplankton) at 21.5 billion tons. A tentative estimate of the mass of animal microplankton brings this value up to about 23 billion tons. Phytoplankton production is estimated at 550 billion tons per year; production of meso- and macroplankton is estimated at 53 billion tons per year for the world's oceans. Since the bulk of the plant mass of the ocean consists of single-celled algae, which multiply

Card 1/2

L 39871-66
ACC NR: AP6018143

rapidly, their annual production is more than 300 times as great as their biomass. This enormous productivity of the phytoplankton makes possible the development of enormous amounts of zooplankton, and ultimately fish, squid, whales, and other commercially important animals. The total plant production is ten times as great as the total animal production. The interrelationships among the various layers of water and the organisms that inhabit them and the role of processes of vertical migration are discussed. Orig. art. has: 1 table. [JPRS]

SUB CODE: 06, 08 / SUBM DATE: 26Mar65 / ORIG REF: 018 / OTH REF: 002

Card 2/2 HS

ACC NR: AP7008880 SOURCE CODE: UR/0030/66/000/009/0104/0107

AUTHOR: Bogorov, V. G. (Corresponding member AN SSSR)

ORG: none

TITLE: Primary production of the ocean and its use

SOURCE: AN SSSR. Vestnik, no. 9, 1966, 104-107

TOPIC TAGS: oceanography, biology

SUB CODE: 08, 06

ABSTRACT: The article cited below is a brief but fact-filled generalization of available data on the primary production of the ocean. For example, the following information is given: In the ocean, in contrast to the land, the biomass of animals is almost 20 times greater than the vegetable mass. This is possible because the ratio of the annual production to the biomass of one-celled plankton algae is renewed every day. Regions with a high productivity of zooplankton (above 100 mg/m^3 of biomass in the surface 100-m layer) occupy 17% of the area of the world ocean, regions of intermediate productivity (from 50 to 100 mg/m^3) — 20%, low productivity (from 25 to 50 mg/m^3) — 29%, impoverished (less than 25 mg/m^3) — 34%. The mass of organisms is distributed nonuniformly

Card 1/2 UDC: 577.472(26)

0929 1681

ACC NR: AP7008880

vertically. Phytoplankton, due to rapid absorption of light by the water, lives primarily in the upper 100-m layer. About 65% of the zooplankton is in the layer from the surface to a depth of 500 m. On the continental shelf, at depths from 0 to 200 m, the biomass of benthos on the average is 200 g/m2, from 200 to 3,000 m — 20 g/m2, and at depths greater than 3,000 m — less than 0.2 g/m2. Depths of 0-200 m constitute only 7.6% of the area of the world ocean, but 82.6% of all the biomass of benthos is found there. Depths of 200-3,000 m occupy 15.4% of the area and account for 16.6% of the total biomass of benthos. Vast areas of the ocean with depths greater than 3,000 m (77%) have only 0.8% of the total biomass of benthos of the world ocean. Orig. art. has: 2 tables. [JPRS: 38,677]

Card 2/2

ACC NR: AP7013694 SOURCE CODE: UR/0213/66/006/006/1055/1058

AUTHOR: Bogorov, V. G.; Rass, T. S.

ORG: Institute of Oceanology, AN SSSR (Institut okeanologii AN SSSR)

TITLE: Dependence of the distribution of fish on the distribution of productive regions of plankton in the Indian Ocean

SOURCE: Okeanologiya, v. 6, no. 6, 1966, 1055-1058

TOPIC TAGS: plankton, oceanographic research facility, animal physiology, research ship, biologic ecology

SUB CODE: 06

ABSTRACT: Three voyages of the research vessel "Vityaz'" were made in the Indian Ocean by the Institute of Oceanology in 1960-1963. Plankton and ichtyological studies over vast areas of this ocean were made during the winter monsoon (31st and 33d voyages) and during the summer monsoon (35th voyage). The data show that the Indian Ocean north of 20°S can be divided into several areas differing in plankton productivity (biomass of the surface layer plankton in mg/m^3): 1) highly productive areas (more than 250 mg/m^3) -- off the Gulf of Aden, at the Seychelles, south of Java, at Christmas Island; 2) rich productive areas (100 -250 mg/m^3) -- middle and northern Arabian Sea, Comores,

Card 1/2

0933 2146

ACC NR: AP7013694

off northeastern Africa, between the Seychelles and Maledive Islands, a latitudinal belt south of the equator, off the southern coast of Java; 3) moderately productive areas (50-99 mg/m^3) bordering the rich productive regions, which are far more extensive to the west of 80°E than to the east; 4) areas of low production (25-49 mg/m^3), characteristic mostly of the eastern parts of the Indian Ocean from 80°E to 100°E; 5) a nonproductive (25 mg/m^3) region extending through a vast area of the central Indian Ocean to the south of 18-20°S, excluding only the area of the West Australian Current. A striking characteristic of the Indian Ocean is the far greater productivity of its western part than its eastern part. In the eastern part there is high productivity only between Java and northwestern Australia. Quantities of large pelagic predator fish such as tuna, dolphins, spearfish and swordfish apparently are considerable. This is confirmed by direct visual observations of schools of fish, the abundance of larval fish of the mentioned groups and the development of pelagic fisheries over the last decade. The distribution of larval fish naturally is closely related to the distribution of productive plankton areas. Schools of adult fish also are encountered mostly in these areas, except for the migration periods, when they cross areas of low productivity. [JPRS: 39,945]

Card 2/2

ACC NR: AP7013695 SOURCE CODE: UR/0213/66/006/006/1093/1099

AUTHOR: Monin, A. S.; Bogorov, V. G.

ORG: none

TITLE: Twentieth anniversary of the Institute of Oceanology of the academy of sciences USSR

SOURCE: Okeanologiya, v. 6, no. 6, 1966, 1093-1099

TOPIC TAGS: oceanography, oceanographic research facility, oceanographic personnel

SUB CODE: 08

ABSTRACT:

The article cited below is an extensive summarization of the work of the Institute of Oceanology during the last twenty years, the most important personalities who have participated in its activities, a progressive year-by-year account of the broadening of its field of operations, its cooperation with other agencies, its participation in international programs, its expeditions and research vessels and the outstanding advances it has contributed in the field of oceanology. Of particular interest is a listing of all the institute's expeditions, their dates, the vessels used, the regions involved and the name of

Card 1/2 UDC: 006.16:551.46

0933 2148

ACC NR: AP7013695

the chief of the expedition. The specialists of the institute have produced more than 2,400 articles and 60 books. The transactions of the institute now constitute 80 volumes. Its associates have defended 10 doctoral dissertations and 76 candidate's dissertations. The present director is Andrey Sergeyevich Monin. There are two branches — the Pacific Ocean Division, in Vladivostok, and the Kaliningrad Division, in the city of the same name, both founded in 1961. The institute has a new laboratory in Moscow, has recently obtained the 6,800-ton research vessel "Akademik Kurchatov", and is scheduled to receive a number of smaller research vessels in the coming years. Orig. art. has: 1 table.

[JPRS: 39,945]

Card 2/2

ACC NR: AR7004035 SOURCE CODE: UR/0081/66/000/022/G020/G020

AUTHOR: Bogova, L. V.

TITLE: Phase and chemical analysis of zirconium diboride

SOURCE: Ref. zh. Khimiya, Part I, Abs. 22G138

REF SOURCE: Tr. Vses. in-ta nauchno-issled. i proyektn. rabot ogneuporn. prom-sti, vyp. 37, 1965, 164-178

TOPIC TAGS: zirconium, phase analysis, zirconium analysis, zirconium diboride

ABSTRACT: The results are described of the determination of ZrO_2, B_4C, $ZrSiO_4$, metallic Zr, SiO_2, B_2O_3, B, Al, Ca, Mg, Fe, TiB_2, C, and ZrB_2, during the phase analysis of zirconium diboride. The analyzed components are separated by treating the samples with various acids and acid mixtures (HNO_3, H_2SO_4, H_2SO_4+HF) and fusion with $K_2S_2O_7$ at this point, $ZrSiO_4$ is separated from B_4C. Various forms of Zr and Ca, Mg, and Al can also be determined by titration with a complexone III solution. Free B and its compounds B_2O_3, B_4C, following separation from other components and conversion into H_3BO_3, are determined by titration with NaOH solution in the presence of mannite. Fe and

Card 1/2

ACC NR: AR7004035

Ti are determined photometrically (GOST 2642-60), while free C is determined by the Wedeking method (Wedekind, Chem. Zeitung, 1907, 31, 654). A. Zozulya. [Translation of abstract]

[AM]

SUB CODE: 07/

Card 2/2

L 29930-66 EWP(k)/EWT(m)/EWP(w)/EWP(v) IJP(c) EM/WW

ACC NR: AR6006201 SOURCE CODE: UR/0124/65/000/010/B052/B052

AUTHOR: Bogoryad, I. B.

34
B

TITLE: Variation methods to the problem of the motion of a thin-walled hollow beam partly filled with fluid in a limitlessfluid

SOURCE: Ref. zh. Mekhanika, Abs. 10B368

REF SOURCE: Dokl. 3-i Sibirsk. konferentsii po matem. i mekhan., 1964. Tomsk, Tomskiy un-t, 1964, 289-291

TOPIC TAGS: thin walled beam, Euler equation, functional equation, ideal fluid

ABSTRACT: The summary of a paper. A linear problem of lateral oscillations of a thin-walled beam partly filled with fluid, in a limitless ideal fluid is studied. The problem is formulated and the functional, for which the Euler's formulas coincide with the equations of this problem are given. The problem of self oscillations is discussed. The problem is solved using the Ritz method. It also is stated that results of the calculations are given in this paper. A. A. Petrov.

SUB CODE: 20, 12/ SUBM DATE: none

Card 1/1 CC

43324
S/040/62/026/006/012/015
D234/D308

AUTHOR: Bogoryad, I.B. (Tomsk)

TITLE: Solution of the problem of oscillation of a liquid partially filling a cavity, by the variational method

PERIODICAL: Prikladnaya matematika i mekhanika, v. 26, no. 6, 1962, 1122 - 1127

TEXT: The method makes it possible to obtain any degree of approximation for a cavity of any form. The displacement potential of the boundary problem is represented as

$$U(x, y, z, t) = \sum_{n=1}^{\infty} p_n(t)\zeta_{\eta_n}(x, y, z). \qquad (1.5)$$

The problem reduces to

$$\iiint_Q \eta_n \Delta\zeta_n \, dQ - \iint_S \eta_n \frac{\partial\zeta_n}{\partial\nu} \, ds - \iint_\Sigma \eta_n \left(\frac{\partial\zeta_n}{\partial\nu} - \sigma_n^2\zeta_n\right) ds = 0 \qquad (1.9)$$

where Q is the volume occupied by the liquid, S is the wet surface

Card 1/2

and Σ the free surface, Ritz' method is applied and the system of equations for the k-th approximation of the n-th eigenfunction is

$$\sum_{i=1}^{k} (a_{ij} - \sigma^2 b_{ij}) c_i = 0 \qquad (j = 1, \ldots, k) \qquad (1.12)$$

where

$$a_{ij} = \iiint_Q \nabla\gamma_i \nabla\gamma_j \, dQ, \qquad b_{ij} = \iint_\Sigma \gamma_i \gamma_j \, d\sigma \qquad (1.13)$$

The method is applied to a spherical cavity, numerical results are given, with the conclusions: 1) Equivalent pendulum is a good approximation to the oscillating liquid for dimensionless depths $\bar{h} = h/R_0 < 0.1$. 2) For sufficiently accurate (up to 1 %) determination of the first natural frequency one should take 3-4 terms in the expansion in the case of small relative depths and 5-6 terms in the case of large relative depths. The results agree with experimental data. The author thanks Z.M. Polyakova and B.I. Rabinovich. There are 7 figures.

SUBMITTED: March 26, 1962

Card 2/2

COUNTRY : Rumania H-5
CATEGORY :

ABS. JOUR. : RZKhim., No. 5 1960, No. 18315

AUTHOR : Bogos, C.
INST. : Not given
TITLE : The Application of Hydraulic Cyclones in the Treatment of Coal-Washing Effluents

ORIG. PUB. : Hidrotehnica, 4, No 2, 61-62 (1959)

ABSTRACT : The tests were made in a low-pressure hydraulic cyclone with the following characteristics: diameter 500 mm, height of cylindrical part 220 mm, height of conic section 580 mm, diameter of feed pipe 50 mm, diameter of discharge pipe 65 mm. It is shown that optimum operating results are obtained at a water consumption rate of ≤ 14 m³/hr and a pressure of 0.5 atm. Under these conditions 2.5 m³ of sludge are discharged per hr; the sludge contains 790 gms of solids per liter. Particles

CARD: 1/2 225

COUNTRY : Rumania
CATEGORY :

3-5

ABS. JOUR. : RZKhim., No. 5 1960, No.

AUTHOR : 18315
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : of ≤ 0.4 mm diameter are retained in the water.
Ya. Matlis

CARD: 2/2

BOGOS, GH

Extension of pneumatic transportation to the match industry. p.425

INDUSTRIA LEMNULUI (Asociatia Stiintifica a Iginerilor si Tehnicienilor din Rominia si Ministerul Industriei Lemnului, Bucuresti, Rumania
Vol.8, no.11, Nov 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no 2, Feb. 1960

Uncl.

BOGOS, GH.

Extension of pneumatic transportation to the match industry. p. 421.

INDUSTRIA LIMNULUI. (Oasociatia Stiinifica a Inginerilor se Tehnicienilor din Rominia se Mintsterul Industriei Limnlui) Bucuresti, Rumania. Vol. 8, No. 11, Nov. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, No. 2, Feb. 1960.

Uncl.

BOGOS, K.F. (Rumynskaya Narodnaya Respublika, g. IAsi)

"Handbook for the pipe fitter" by [kand.tekhn.nauk] M.M. Sapozhnikov. Reviewed by K.F.Bogos. Vod. i san.tekh. no.11:39 N '61. (MIRA 15:6)
(Pipe fitting) (Sapozhnikov, M.M.)

GECOW, Anna; BOGOSAVLJEVIC, Halina; MACIEREWICZ, Maria

Several problems on the clinical course & treatment of purulent meningitis. Polski tygod. lek. 14 no.12:534-539 23 Mar 59.

1. Z Miejskiego Szpitala Zakaznego nr 3 w Warszawie; ordynator oddzialu neuroinfekcji: dr med. Danuta Lukaszewicz Danncowa, dyrektor szpitala: doc. dr med. Aniela Marks-Zakrzewska. Adres: Warszawa, ul, Sienna 60 Miejski Szpital Zakazny nr 3.
(MENINGITIS, in inf. & child
diag. & ther. of purulent meningitis (Pol))

LUKASZEWICZ-DANCOWA, Danuta; WROBLEWSKA, Monika; BOGOSAVLJEVIC, Halina; DOBROWOLSKA, Halina; TAYSCH, Zofia; WROBLEWSKA, Zofia

Role of enteroviruses in aseptic cerebrospinal meningitis in children. Polski tygod. lek. 16 no.40:1524-1529 2 O '61.

1. Z Miejskiego Szpitala Zakaznego Nr 3 w Warszawie; dyr.: doc. Marks-Zakrzewska, ordynator oddzialu neuroinfekcji; dr Danuta Lukaszewicz-Dancowa i z Panstwowego Zakladu Higieny w Warszawie; dyr.: prof. dr med. F. Przesmycki.

(ENCEPHALITIS virol) (VIRUS DISEASES in inf & child)

BOGOSAVLJEVIC, M.

Continual processes in the chemical industry. p. 565.
TEHNIKA (Savez inzenjera i techicara Jugoslavije) Beograd.
Vol. 11, no. 4, 1956

SOURCE: East Europe Accession List (EEAL),
Library of Congress, Vol. 5, no. 11, Nov. 1956

BOGOSAVLJEVIC, M

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Appli- H-15
cation. Industrial Organic Synthesis

Abs Jour : Ref Zhur - Khim., No 24, 1958, No 82562

Author : ~~Bogosavljevic~~ M.
Inst : -
Title : Review of Methods for Manufacturing Dinitro-o-Cresole by Sulfonation and a Possibility of its Obtainment by the Direct Nitration of o-Cresole with the Use of Sulfonation Mixtures I.

Orig Pub : Tehnika, 1957, 12, No 11; Hem. ind. 11, No 11, 165-169

Abstract : The presently used method for obtaining dinitro-o-cresole (I) of 86-86° melting point, consists in the action of H_2SO_4 on o-cresole (II) and of dilute HNO_3 on the obtained sulfocresole (III) that sulfo-groups in the orto- and para-positions. Of the most important factors affecting sulfonation (S), are: temperature, duration of the reaction, and the weight ratio of H_2SO_4: II which usually constitutes 1.2: 1.6. In order to prevent oxidation of II during S,

Card : 1/3

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Appli- H-15
cation. Industrial Organic Synthesis

Abs Jour : Ref Zhur - Khim., No 24, 1958, No 82562

normally > 70% H_2SO_4 (Usually 93%) is being employed. The optimum temperature of S is 90-100°. An excess of H_2SO_4 causes formation of disulfocresole, that decreases the yield of I during the nitration phase (which is normally conducted in two steps). Methods of commercial production of I in different countries are also presented. All of these methods have the following characteristic features: 1) concentrated H_2SO_4 is employed in S; 2) after S, the reacting medium is diluted so that the nitration is conducted with minimum heating; when 55-60% HNO_3 is employed, it is diluted with water, when 25% HNO_3 is employed, no water is added; 3) in the production of I, H_2SO_4 and HNO_3 are used separately, and not as a mixture; 4) spent acid (SA) contains H_2SO_4, which cannot be used in S, and considerable quantity of HNO_3; 5) temperature of SA is 80-90° and the mixture is highly oxidizing. Analyses of the existing

Card : 2/3

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Appli- H-15
cation. Industrial Organic Synthesis

Abs Jour : Ref Zhur - Khim., No 24, 1958, No 82562

methods indicate that it is theoretically possible to obtain I by the direct two-stage nitration of II, utilizing a nitrating mixture (NM). On the basis of calculations the author offers the following composition of a mono-NM (exprssed in mols per mol of II): 1-H_2SO_4, 1-HNO_3, 36-H_2O; composition of SA: 1-H_2SO_4, 37 - H_2O. For the di-NM: 1 - H_2SO_4, 1.8-HNO_3, 37-H_2O; composition of SA: s - H_2SO_4, 0.4 - HNO_3, 37 - H_2O. -- Z. Rachinskiy

Card : 3/3

COUNTRY : Yugoslavia H-15
CATEGORY :

ABS. JOUR. : RZKhim., No. 21 1959, No. 75664

AUTHOR : Bogosavljevic, M.
INST. : Not given
TITLE : A Survey of Methods for the Production of Dinitro-o-Cresol by Sulfonation [sic] and the Possibility of Its Production by the Direct Nitration of*
ORIG. PUB. : Tehnika, 12, No 12, 957; Hem Ind, 11, No 12, 184-187 (1957)
ABSTRACT : A critical analysis of methods used in the production of dinitro-o-cresol (I) shows the feasibility of the direct nitration, carried out in two ways: (a) the single step nitration of o-cresol (II) to I and (b) the multistage nitration via mononitro-II to I. 100 gms of a mixture of H_2SO_4, HNO_3, and water (14 : 2 : 84) is poured into the reactor and heated to 75° with the continuous addition for 1 hr of 50 gms II and 775 gms of a mixture containing 15.12% H_2SO_4,

CARD: 1/3 * o-Cresol with a Mixture of Sulfuric and Nitric Acids. II.

COUNTRY : Yugoslavia
CATEGORY :

ABS. JOUR. : RZKhim., No. 21 1959, No. 75664

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : 11.04% HNO_3, and 73.84% water. The reaction proceeds at 75°; at the completion of the reaction the product mixture is heated to 85° for 30 min. The I obtained has an mp of 82.85°, yield 74%. This product is charged into two reactors connected in series and 50 gms II and 1,094 gms of a mixture of 13% H_2SO_4, 8% HNO_3, and 79% water are added at 75° to the first reactor each hr; from the second reactor, which is maintained at 85°, I is withdrawn, mp 73°, yield 75%. The

BOGOSAVLJEVIC, Miodrag, dipl. inz.; KRSMANOVIC, Miladin, dipl. inz.

Dynamic characteristics of the reactor for toluol [illegible]onitration.
Automatika 5 no.4:282-287 '64.

1. Faculty of Technology, Novi Sad (for Bogosavljevic).
2. Faculty of Technology, Belgrade (for Krsmanovic).

SHIPULIN, A.P., inzh. (Khar'kov); BOGOSLAVETS, A.I., inzh. (Khar'kov)

Standardized station relay blocking system. Zhel. dor. transp. 46 no.8:75-76 Ag '64. (MIRA 17:11)

1. Stantsiya Khar'kov-Balashovskiy (for Bogoslavets).