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Approximately 20 people survived to replenish the isolated island's population. Roughly four generations after the typhoon, the citizens of Pingelap began exhibiting symptoms of a rare recessive disorder known as Achromatopsia. Achromatopsia is characterized by extreme light sensitivity, poor vision, and complete inability to distinguish colors (3). This anomaly is the focus of Oliver Sacks' new book The Island of the Colorblind and its publication has succeeded in raising public awareness about the rare hereditary disease of Achromatopsia. Of the roughly the 3000 people living in Pingelap today, 5% to 10% of them are affected by the disorder and about 30% are carriers (3). All of these people are able to trace their ancestry to a single male typhoon survivor who researchers believe was the carrier of the disease that emerged when some of his descendents intermarried (3). The three primary colors - as far as light is concerned - are red, green, and blue. In order to "see" images, the human eye enables light to stimulate the retina (a neuro-membrane lining the inside of the back of the eye). The retina is made up of what are called rods and cones. The rods, located in the peripheral retina, give us our night vision, but can not distinguish color. Cones, located in the center of the retina (called the macula), let us perceive color during daylight conditions. The cones of the eye each contain a light sensitive pigment which is sensitive over a range of wavelengths (each visible color is a different wavelength from approximately 400nm to 700nm). Genes contain the coding instructions for the pigments present in the cones, and if the coding instructions are wrong, then the wrong pigments will be produced, and the cones will be sensitive to different wavelengths of light (resulting in a color deficiency). The colors that we see are completely dependent on the sensitivity ranges of these pigments. Many people tend to think people who are "colorblind" live their lives in black and white - like watching a black and white movie or television. This is a very common misconception. It is extremely rare to be totally colorblind (Monochromasy - complete absence of any color sensation - as is the case of the citizens of Pingelap). There are many different types and degrees of colorblindness and they are more correctly labeled 'color deficiencies' (2). People with normal cones and light sensitive pigments (trichromasy) are able to see all the different colors and subtle mixtures of them by using cones sensitive to one of three wavelengths of light - red, green, and blue. A slight color deficiency is present when one or more of the three cones light sensitive pigments are coded incorrectly in the person's genes and their peak sensitivity is shifted (Anomalous Trichromasy - includes Protanomaly and Deuteranomaly). A more severe color deficiency exists when one or more of the cones light sensitive pigments is altered (Dichromasy - includes Protanopia and Deuteranopia).The Color Wheel as it appears to a person with normal vision(2) People with normal cones and light sensitive pigments (trichromasy) are able to see all the different colors and subtle mixtures of them by using cones sensitive to one of three wavelengths of light - red, green, and blue. A slight color deficiency is present when one or more of the three cones light sensitive pigments are coded incorrectly in the person's genes and their peak sensitivity is shifted (Anomalous Trichromasy - includes Protanomaly and Deuteranomaly). A more severe color deficiency exists when one or more of the cones light sensitive pigments is altered (Dichromasy - includes Protanopia and Deuteranopia). "Five percent to eight percent (depending on the study you quote) of the men and 0.5% of the women of the world are born colorblind. That's as high as one out of twelve men and one out of two hundred women"(2). Protans (red-weak individuals) and Deutans (green-weak individuals) make up 99% of this group. Protanomal (one out of 100 males): Protanomaly is referred to as "red-weakness." "Any redness seen in a color by a normal observer is seen more weakly by the Protanomalous viewer, both in terms of its "coloring power" (saturation, or depth of color) and its brightness" (2). Red, orange, yellow, yellow-green, and green, appear somewhat displaced toward green, and all appear paler than they do to the normal observer. The redness component that a normal observer sees in a violet or lavender color is so weakened that the color that Normals call "violet" may look only like another shade of blue for the Protanomalous observer. Under poor viewing conditions, such as when driving in glaring sunlight or in rainy or foggy weather, it is possible for a Protanomalous individual to mistake a blinking red traffic light for a blinking yellow one. He or she may similarly fail to distinguish a green traffic light from the various "white" lights in store fronts, signs, and street lights that line the streets (2). Deuteranomaly (five out of 100 males): The Deuteranomalous person is considered "green weak". Similar to the Protanomalous person, he/she is poor at discriminating small differences between the red, orange, yellow, green regions of the spectrum. For a Deuteranomalous individual, shades that appear to exhibit shades of green to a normal eye will appear redder. "One very important difference between Deuteranomalous individuals and Protanomalous individuals is Deuteranomalous individuals do "not" have the loss of "brightness" problem"(2). Some Protanomalous and Deuteranomalous people may not even be aware that their color perception is in any way different from normal. Many go through life with very little difficulty doing tasks that require normal color vision.Dichromasy- can be divided into Protanopia and Deuteranopia (two out of 100 males): These individuals normally know they have a color vision problem and it can effect their lives on a daily basis. They see no perceptible difference between red, orange, yellow, and green. All these colors that seem so different to the normal viewer appear to be the same color for this two percent of the population (2). I. Protanopia (one out of 100 males):The Color Wheel from the prospective of a Protanope(2) For the Protanope, the brightness of red, orange, and yellow is much reduced when compared to normal. "This dimming can be so pronounced that reds may be confused with black or dark gray, and red traffic lights may appear to be extinguished" (2). Protanopes may learn to distinguish reds from yellows and from greens "primarily on the basis of their apparent brightness or lightness, not on any perceptible hue difference" (2). Likewise, violet, lavender, and purple are indistinguishable from various shades of blue because their reddish components are so dimmed that they become to be invisible. II. Deuteranopia (one out of 100 males): The Color Wheel from the prospective of a Deuteranope(2) The Deuteranope suffers the same hue discrimination problems as the Protanope, but without the dimming. The names red, orange, yellow, and green really mean very little to a Deuteranope aside from being different names that every one else around him seems to be in concurrence upon. Similarly, violet, lavender, purple, and blue all appear to be the same to a viewer with Deuteranopia.Achromatopsia Achromatopsia, as it appears on the island of Pingelap, differs from the above mentioned disorders in that persons born with congenital Achromatopsia have never seen color at all. Achromatopsia occurs when two copies of the mutated genes that code for the disease are present. Olof H. Sundin and his colleagues at The Johns Hopkins University reported in the July 2000 issue of Nature Genetics (25: 289-293) that "Pingelapese islanders with Achromatopsia have a single mutation in both copies of a gene dubbed CNGB3. The gene codes for one component of a type of ion channel in the plasma membrane of cone cells--specialized nerve cells in the eye's retina. The ion channels are essential for generating electrical responses to red, green, and blue light in cone cell receptors; cone cells in people with Achromatopsia do not respond to light" (3). Congenital Achromatopsia is an extremely rare hereditary vision disorder that affects 1 person out of 33,000 in the United States (5). Congenital Achromatopsia is sometimes referred to as "stationary cone dystrophy" because it is not progressive nor does it lead to blindness (5). Coping with light sensitivity is the most significant problem faced by Achromats. "In moderately bright indoor spaces or outdoors just after dawn or just before dusk, some Achromats adapt to their reduced level of visual functioning without resorting to tinted lenses, by using visual strategies such as blinking, squinting, shielding their eyes, or positioning themselves in relation to light sources. Others routinely wear medium tinted lenses in such settings. At higher levels of illumination, the vision of persons with Achromatopsia decreases. In full sunlight, outdoors, or in very bright indoor spaces, almost all Achromats use very dark tinted lenses, in order to function with a reasonable amount of vision, since their retinas do not possess the photoreceptors needed for seeing well in such settings" (5). "Congenital Achromatopsia should not be confused with Cerebral Achromatopsia, which is an acquired form of total colorblindness that can result from trauma, illness, or some other cause [as is the case in Sacks' account of The Case of the Colorblind Painter (Found as part of his book An Anthropologist on Mars) - a highly informative and enjoyable read]. Persons who develop Cerebral Achromatopsia report that they see a monochromatic world, all in shades of gray. They are able to see gray because of having previously experienced color vision, making it possible for them to perceive the absence of color as gray. This is in sharp contrast to the visual perception of congenital, complete Achromats (i.e., complete rod Monochromats), who report that the concept of "gray" is as mystifying to them as is the concept of any of the other colors. Persons with Cerebral Achromatopsia are diagnosed by neurologists, rather than eye specialists. Their loss of color perception is not accompanied by severely impaired vision, extreme light sensitivity, or any abnormality in the photoreceptors of the retina, as is the case with persons who have congenital Achromatopsia" (5).Forums such as The Achromatopsia Network are concerned with and strive to promote the following issues concerning Achromats: Ways to cope with the changing levels of visual impairment which occur for Achromats as a result of changes in illumination factors Finding tinted lenses that adequately meet the needs of Achromats Thoughts about the ways that hypersensitivity to light affects our lives Designing home and work spaces to meet special needs of Achromats Communicating effectively to others about how we see and what kinds of assistance we need in various situations Ways to simplify reading, writing, and other visually oriented tasks Coping with the many ways that being colorblind affects our experiences, our options, and our level of participation in different kinds of activities Coping with tasks that involve color identification and color coordinating Developing color concepts; communicating with others about color The consideration of special abilities, traits, or enhanced sensitivities which may result from having Achromatopsia Concerns about personal appearance in connection with 1. wearing sunglasses and/or other kinds of lenses and 2. visible manifestations of achromatopsia, such as squinting, blinking, lowered eyelids, nystagmus, etc. Ways to maximize the use and enjoyment of our normal rod vision -- at twilight, at night, or in darkened indoor spaces Social and psychological aspects of 1. being visually impaired, 2. having what can be called a "hidden disability," and 3. experiencing varying levels of vision impairment, depending on lighting factorsWays in which having Achromatopsia can affect relationships, dating, finding a mate, and parenting experiences Experiences with special resources for the vision impaired: organizations, agencies, programs, services, etc. Coming to terms with words such as "blind," "disabled," and "handicapped" Dealing with visual stress and with neck, shoulder, and back tension, as well as with the overall stress of having to manage with limited vision Experiences and ideas with regard to the need to have equal access to educational opportunities and to public accommodations Dealing with the problems that networkers encounter in terms of access to printed information and signage, etc. Special needs and special accommodations in school settings at all levels Helpful optical aids for near vision tasks and distance vision tasks Special needs in orientation and mobility -- skills, strategies, and resources Vocational options and career counseling for persons with Achromatopsia Special accommodations in the workplace Adaptive devices and adaptive methods used in the activities of daily living, in sports, and in other recreational activities.(7) The case of the "Island of the Colorblind" is an extremely interesting juxtaposition of genetics, neurology, and the reality of the world as each person perceives it. It illustrates the necessity of diversity within populations to ensure that genetic mutations such as congenital Achromatopsia are suppressed through the natural selection process. Cases of similar oddities have been able to hold the attention of neurologists, physicians, and lay people for centuries. Advancements in the neurosciences continue to illuminate new understandings and possible explanations for an array of life's mysteries, and the case of 'the island of the colorblind' is no exception.WWW Sources (1) The Mind Traveler: The Island of the Colorblind.A website with information on Knut Nordby who was born completely colorblind. (2) What is Colorblindness and the different types? What is Colorblindness and the different types? Information about colorblindness and color deficiencies. Color wheel images used in this paper were taken from this site. (3) Not seeing Red (or Blue or Green).Article from BioScience Online. Issue: August, 2000. (4) The Island of the Colorblind.Information on Oliver Sacks' book The Island of the Colorblind.(5) What is Achromatopsia? From the Achromatopsia Network. (6) About Oliver Sacks' book "The Island of the Colorblind" and the PBS Documentary film "Island of the Colorblind". (7) Special needs of persons with Achromatopsia. Information from The Achromatopsia Network.Send us your comments at Serendip by Serendip 1994- - Last Modified: Wednesday, 02-May-2018 10:53:23 CDT Welcome to Pingelap, a Tropical island in the North Pacific Ocean, part of the majestic Pacific Ocean. This guide offers a comprehensive overview of what makes Pingelap unique from its geography and climate to its population, infrastructure, and beyond. Dive into the details: Geography and size of PingelapSize: 1.458 km Coastline: 8.3 km Ocean: Pacific Ocean Sea: North Pacific Ocean Continent: OceaniaPingelap is a Small Island spanning 1.5 km with a coastline of 8.3 km.Archipel: Micronesia A region in the western Pacific Ocean comprising thousands of small islands, known for their unique cultures, languages, and marine ecosystems.Tectonic Plate: Sunda Extends across Southeast Asia, encompassing parts of the Sunda Shelf, known for its interaction with the Australian Plate, contributing to volcanic activity in Indonesia.The geographic heart of the island is pinpointed at these coordinates: Latitude: 6.20925856 / Longitude: 160.70789139Climate and weather of PingelapClimate Zone: Tropical Climate Details: Tropical Rainforest Climate Temperature: HotClimate Characteristics: This climate is typified by heavy rainfall throughout the year, high humidity, and consistently high temperatures, leading to lush rainforests and rich biodiversity. Seasonal temperature variations are minimal. Topography and nature of PingelapTimezone: UTC+11:00 Timezone places: Pacific/Guadalcanal Max. Elevation: 10 m Mean Elevation: 7 m Vegetation: Evergreen Needleleaf Forest Tree Coverage: 100%The mean elevation is 7 m. The highest elevation on the island reaches approximately 10 meters above sea level. The island is characterized by Plains: Flat, low-lying lands characterized by a maximum elevation of up to 200 meters. On islands, plains are typically coastal lowlands or central flat areas.Dominating Vegetation: Evergreen Needleleaf Forest Dominated by evergreen coniferous trees such as pines and firs, which retain their needle-like leaves throughout the year. These forests are often found in cooler climates. Pingelap has a tree cover of 100 %.Vegetation: 2 vegetation zones Low Diversity Island Islands with two distinct vegetation zones offer slightly more ecological variety. These zones could be due to differences in elevation, moisture, or other environmental factors. While still limited in biodiversity, these islands may offer a contrast between the two zones, such as a coastline with mangroves and an inland area with grassland.Infrastructure and Travelling to PingelapDoes the island have a public airport? no. There is no public and scheduled airport on Pingelap. The nearest airport is Kosrae International Airport, located 267 km away.Does the island have a major port? no. There are no major ports on Pingelap. The closest major port is LELE HARBOR, approximately 276 km away.The mean population of Pingelap is 67 per km. Pingelap is Gently Populated. The island belongs to Federated States of Micronesia. Continuing your journey, Kosrae Island is the next notable island, situated merely km away.Error 403 The request cannot be completed because you have exceeded your quota. : quotaExceededFederated States of Micronesia is classified as Developing region: Regions characterized by lower income levels, with economies in the process of industrialization and modernization. The level of income is Lower middle income.News Latest Updates and Headlines from PingelapStay informed with the most recent news and important headlines from Pingelap. Heres a roundup of the latest developments.Loading... Please note: The data used here has been primarily extracted from satellite readings. Deviations from exact values may occur, particularly regarding the height of elevations and population density. Land area and coastline measurements refer to average values at mean high tide. Any analysis of the temperature and precipitation records for Kosrae must be prefacedwith the caution that the record is not complete. The records of temperature andprecipitation for Kosrae have gaps ranging from one month up to a six year gap between1979 and 1986. Between 1973 and 1986 there was no year for which summary records exist forall twelve months. The record starts with five months of data in 1954 and continues up toand including 1995.The temperature record shows a monthly mean low temperature of 25.1 Celsius, an average27.2 Celsius, and a monthly mean high temperature of 30.1 Celsius. Sixty-three percent ofthe monthly mean temperatures fell within 0.8 degrees Celsius of the mean. There is nopattern of seasonal temperature change, the difference in the mean monthly temperaturebetween any two months in the year is less that 0.3 Celsius. The temperature data does notshow any trend in temperature, revealing instead indications of instrument and measurementerrors on a scale that would hide any trend data. PrecipitationThe precipitation data also has gaps in it, including missing months and the large 1979to 1985 gap that the temperature data possesses. The record starts with five months ofdata in 1954 and continues up to and including 1995.The precipitation record shows a monthly mean low precipitation of 29 millimeters inFebruary 1992. This marked the start of a drought on Pohnpei, with a twelve month periodof below average rainfall from February 1992 to February 1993.The monthly mean precipitation is 420 millimeters, and a monthly mean highprecipitation of 1351 millimeters fell in April 1960. 1351 millimeters (over fifty inches)exceeds the typically annual rainfall in the Midwestern area of North America. Sixty-threepercent of the monthly mean precipitation fell within 190 millimeters of the mean.Statistics for the total annualprecipitation are plagued by missing data. While some years are complete for all 12months, on average there are only ten months of data per year. There are years with nodata, and years with only one month of data. Years in which there was no data have beenexcluded. In order to perform some form of analysis, years for which partial data existshave had their mean precipitation for the existing months multiplied out over a 12 monthperiod.The mean total annual precipitation from the adjusted data is 4960 millimeters, theminimum total annual precipitation is 2760 millimeters (based on nine months in 1969) andthe maximum total annual precipitation is 7554 (based on twelve months in 1958). Thelowest annual average for a year with twelve months of measurements is 3342 mm in 1992.The mean total precipitation taken for years with twelve months of measurements is 5490 mm(n=13, that is, 13 years are complete between 1957 and 1994). The total annual precipitation trends downward, but only as an artifact of a period ofhigh precipitation averages in the late 1950's. Data will have to be collected over alonger period of time prior to concluding whether the average annual precipitation isactually decreasing. The rate of decrease as modeled by a linear best fit equation is 40millimeters per year, but given that this is based on artificially adjusted data theconclusion that precipitation is actually decreasing should not be drawn. Data from theJapanese period would be of valuable assistance in determining precipitation trends.There is a pattern of seasonal precipitation when the monthly means are combined.Between June and early November Kosrae experiences average to below average rainfall. Meanrainfall is higher in December and from March to June. During January and Februaryrainfalls are below average. This pattern may be a result of the Intertropical ConvergenceZone (ITCZ) moving southward over Kosrae in November and December, and then movingNorthward over Kosrae in March through April. The precipitation spike in late November andearly December may also be due to tropical storm systems that form in conjunction with theITCZ. Average Daily Wind Speeds in Pohnpei 1984-1995Historical wind data for Kosrae either does not exist or is not available. The dataprovided is for the island of Pohnpei. The data for average daily wind speeds in Pohnpeiis very complete with 4369 daily average wind speed measurements. The average daily windspeed in Pohnpei was 10 km/hr from January 1984 to July 1995. The highest daily averagewas 34 km/hr on the 18th of May, 1986. Tropical storm strength winds would be 55 km/hr(average over a one minute interval), hence the island of Pohnpei has not had 24 hours oftropical storm strength winds. There is a seasonal variation in the average daily windspeeds with higher than the annual average wind speed from December to May and lower thanthe annual average from June to November. The longest period of above average winds is an87 day period from December 1992 to March 1993. While prolonged winds of a given directionacross a large enough fetch can affect sea levels in this region, the average daily winddata does not include directional information. Report written by Dana Lee Ling, Spring 1995.Weather Work COMFSMChen, K.X. 1994. Storm surge disaster and formation mechanism in Tianjin. Ocean Development and Management 11(3): 4143 (in Chinese). 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History change and future trends of storm surge disaster in chinas coastal areas. Journal of Natural Disasters 9(3): 2330 (in Chinese). Google Scholar Yang, H.T., S.Z. Tian, L. Ye, et al. 1991. Chinese marine disasters four decades compilation, 47. Beijing: China Ocean Press (in Chinese). Google Scholar Ye, L., and F.J. Yu. 2002. The long-term change and forecast of storm surge disasters in China. Marine Forecasts 19(1): 8996 (in Chinese). Google Scholar W0000 Tropical cyclones normally occur during the months of May to November, and are particularly prevalent during September. Tropical cyclone advisory bulletins and/or warnings are issued by the Hong Kong observatory whenever a tropical cyclone centred within 800 km of Hong Kong poses a threat to the territory. For your own safety, you should stay alert at all times and be prepared to deal with changing conditions at short notice. Remember that areas that may have been previously sheltered may quickly become exposed. Neither should you relax precautions when the tropical cyclone is moving away from Hong Kong, as high winds are likely to persist for some time. You should stay indoors where it is safe until winds moderate. Information on other hazards associated with the tropical cyclone will be included in warning bulletins. When necessary, separate warnings of heavy rain, flooding and landslips will be issued. Actions to take when a Standby Signal No.1 is in force: Precautions should be taken. If you are planning an outing, remember that the tropical cyclone may affect your trips. Beware that strong winds may occur over offshore waters. Beware of possible swells. Listen to radio, watch TV or browse the Observatory's website and mobile app for latest information of the tropical cyclone. Actions to take when a Strong Wind Signal No.3 is in force: Make sure objects likely to be blown away are securely fastened or taken indoors. Overhanging facilities and temporary structures outdoors should be securely fastened or placed on the ground. Drains should be cleared of leaves and rubbish. People in low-lying areas should take precautions against flooding. Stay away from the shoreline and not to engage in water sports. Small vessels should seek shelter without delay. Listen to radio, watch TV or browse the Observatory's website and mobile app for further information about the tropical cyclone. Actions to take when a Gale or Storm Signal No. 8 is in force: Complete all precautions now before gales commence. Lock all windows and doors, insert reinforced shutters and gates if they are available. Adhesive tape fixed to large window-panes in exposed positions will reduce damage and injury by broken glass. Do not stand near windows on the exposed side of your home. Make sure you have a safe place to shelter, should windows be broken. Owners of neon signs should switch off the electricity supply to the signs. Park your car where it is safe. Owing to storm surge, low-lying areas may have serious flooding or backflow of seawater. Avoid going to likely affected low-lying areas and stay away from dangerous places. Avoid staying in the street. Return home as soon as possible if conditions so permit. Actions to take when an Increasing Gale or Storm Signal No. 9 is in force: Stay indoors. If you are reasonably protected, stay where you are. Do not touch electric cables that have been blown loose. Stay away from exposed windows and doors because glass, already under strain from wind pressure, will shatter easily if hit by a flying object. Make sure you have a safe place to shelter. You should only fix broken windows and doors when there is no danger in doing so. People outdoors should find a safe place now and remain there until the danger is over. Actions to take when a Hurricane Signal No. 10 is in force: Micronesia Format Situation Report Download Report (PDF | 877.76 KB) A. Situation analysisDescription of the disasterTyphoon Maysak formed from a tropical depression off Pohnpei State in the Federated States of Micronesia (FSM) which tracked west and intensified, making landfall in Chuuk lagoon on 29 March 2015 with damaging winds and torrential rainfall which also affected many of the outer islands. Maysak continued west making landfall again at Ulithi atoll in the north-west of Yap State on 1 April 2015. Upgraded to a super typhoon with sustained winds of over 160 miles per hour, significant damage was reported to homes, infrastructure and agricultural resources Strong, destructive winds were also reported on neighboring islands and the main island of Yap. Five deaths were reported in Yap State and a total of 35,000 people affected in the two States.On 30 March, the President of FSM issued an emergency declaration for both States and activated the National Emergency Taskforce to coordinate all response efforts, including the mobilization of national government resources and international assistance. The Government of FSM subsequently released USD $1.5M to support the relief effort to cover immediate food, water and NFI distributions. USAID followed with support to longer term relief of over USD $2M in emergency relief supplies, water and sanitation, shelter, food and logistics under the Compact of Free Association that exists between FSM and the United States.Two additional weather systems - Typhoon Noul and Tropical Storm Dolphin - followed in quick succession impacting Yap again and the States of Kosrae and Pohnpei. Some damage was caused to homes and infrastructure.The initial Disaster Relief Emergency Fund of CHF 150,382 approved 4 April 2015 was to enable distribution of relief supplies for 1,000 households. The number of households was revised to 2,157 after further assessments, for which the DREF supported mobilization and logistical support for MRCS staff and volunteers to distribute the National Societys prepositioned emergency supplies and donated goods and the replenishment of its stock of non-food items for 400 households. The DREF was revised in June 2015 to CHF 147,027. The unspent balance of CHF 30,236 will be returned to the DREF pot. The International Federation of Red Cross and Red Crescent Societies (IFRC), on behalf of the Micronesia Red Cross Society (MRCS), would like to thank Canadian Red Cross Society/ Canadian Government (DFATD) and New Zealand Government for their generous contribution to the replenishment of this DREF. Format Dangerous, prolonged heat is ongoing in the Mid-South to Mid-Mississippi Valley and heat expands into the Northeast for a brief period today. Widely scattered instances of flash flooding due to heavy rains are forecast from northeast Kansas to much of Indiana. Scattered strong to severe thunderstorms are possible across parts of New England, northern Mid-Atlantic, and North Dakota. Read More > Thesigningceremony of MOU on the road projects in Kosrae State and Yap State between China International Development Cooperation Agency and Department of Transportation, Communications & Infrastructure (TC&I) of the FSM was held in the Department of Foreign Affairs on March26.H.E.Wu Wei, Chinese Ambassador to the FSM,and T.H. Edward Albert, Acting Secretary of the Department of TC&I, signed theMOUon behalf of the competent authorities of the two countries. T.H. Lorin S. Robert, Secretary of Foreign Affairsand other officials attended the ceremony.Wu said that the signingof the MOUontheroadprojectsis a concrete measure to implement the important consensusreached by President Xi Jinping and President Wesley W. Simina, an important outcome of thebilateralmeeting between Vice Premier Ding Xuexiang and Vice President Aren B. PalikinBoao, and a practical action to jointly promotehigh-quality Belt and Road cooperation and implement the Global Development Initiative. China is willing tostrengthen practical cooperation with the FSM on the basis of the one-China principle and push forward the in-depth development of China-FSMComprehensive Strategic Partnership for the benefit of the two peoples.Robertand otherofficialsthanked China for its long-term support and assistanceto the FSM, saying that the FSM sidewill continue to firmly adhere to the one-China policy, deepen friendly cooperation with China and promote the continuous development of bilateral relations. A handover ceremony of food assistance to the people affected by the tropical storm in southern Madagascar was held in Tulia on Nov 25. The project, which was funded by China's Global Development and South-South Cooperation Fund and jointly implemented by China and the World Food Program (WFP), will directly benefit nearly 50,000 local people affected by the storm. Chinese Ambassador to Madagascar Ji Ping, United Nations Resident Coordinator in Madagascar Abdou Dieng, and WFP Country Director in Madagascar Mamadou Mbaye attended and addressed the ceremony.In his address, Mbaye said the shipment of nearly 1,600 tons of food was to be mainly distributed in the Atsimo-Andrefana and Menabe regionsin southern Madagascar. He lauded the Chinese government's assistance to Madagascar at a time when the country'sgrain supply is scarce as an important manifestation of global solidarity in tackling the food crisis. Pingelap is an atoll in the Pacific Ocean, part of Pohnpei State of the Federated States of Micronesia, consisting of three islands: Pingelap Island, Sukoru and Daekae, linked by a reef system and surrounding a central lagoon, although only Pingelap Island is inhabited. The entire system has a land area of 1.8km (455 acres) at high-tide, and is less than 2.5 miles (4.0km) at its widest point. The atoll has its own language, Pingelapese, spoken by most of the atoll's 250 residents.The first European observer of the islands was Captain Thomas Musgrave in the ship Sugar Cane. Captain MacAskill in Lady Barlow revisited them in 1809. Errors in measurement of their location resulted in the islands being separately named on charts in the 19th century as the Musgrave Islands and the MacAskill islands, within the Caroline archipelago.Historically, the Ouwa or the Paramount Chief or King of Pikelap which is a hereditary title that granted supreme rule of the land, ruled the island of Pikelap which is now known as Pingelap. Japan seized the atoll in October 1914, following the start of World War I. The hereditary system remained in place during Japanese rule, although the title was renamed "Island Magistrate".Japan used the southern part of Pingelap Island during hostilities in the Pacific Ocean theater of World War II for a supply base. Allied Forces later attacked it. The presence of foreign troops on the island led to the introduction of a number of infectious diseases, including gonorrhoea, tuberculosis and dysentery, which reduced the population from its pre-war level of around 1000 to 800, and decreased the fertility rate significantly.The arrival of the U.S. Navy in 1945 resulted in the setting up of a democratically elected system alongside the traditional system, which gradually weakened in power. Universal primary education was provided for Pingelapese children and a limited health care scheme was set up to eradicate the diseases introduced during the war.During the 1960s, the Peace Corps and U.S. Air Force settled on the main island. The U.S. Air Force constructed a missile watching station in the northeast of the island and a pier, with work beginning in 1978 on an airstrip, jutting into the lagoon, on the main island. The runway was finished in 1982, and currently Caroline Islands Air makes two or three flights daily to and from the atoll.Pingelap enjoys a tropical climate, with even, warm temperatures throughout the year.Precipitation is generally plentiful, with heavy year-round rainfall. elevation 8 feet (2.4m)A significant proportion of the population has complete achromatopsia due to total absence of working cones in their eye retinas, leaving them with only rods, a recessive genetic disorder that causes total color blindness in sufferers. This condition is known on the island as maskun, meaning literally "not see" in Pingelapese.Complete achromatopsia is normally a very rare condition, and its prevalence on the island has been traced back to a population bottleneck in 1775 after a catastrophic typhoon swept through the island, leaving only about 20 survivors. One of these, Doahkaesa Mwanenihsed (the ruler at that time), is now believed to have been a carrier for the underlying genetic condition, but the achromatopsia disorder did not appear until the fourth generation after the typhoon, by which time 2.7% of the Pingelapese were affected. Since achromatopsia is an autosomal recessive disorder, inbreeding between the descendants of Doahkaesa Mwanenised would result in an increased recessive allele frequency. By generation six, the incidence rose to approximately 4.9%, due to the founder effect and inbreeding, with all achromats on the island nowadays tracing their ancestry to Doahkaesa Mwanenihsed.Today the atoll is still of particular interest to geneticists; due to the small gene pool and rapid population growth, the disorder is now prevalent in almost 10% of the population, with a further 30% being unaffected carriers. (By comparison, in the United States, only 1 in 33,000, or 0.003%, are affected). Leading neurologist Oliver Sacks's 1997 book The Island of the Colorblind references the island.It is reported that one Pingelapese island sea-fisherman with this condition has difficulty seeing in bright sunlight, but at night can see in much fainter light than people with normal vision can; he uses this ability in a boat at night waving a large burning torch about to attract or confuse flying fish, which he then catches; the flying fish act as if the torch is the moon. When Sanne De Wilde was photographing the island, she said that red was the most common color the islanders claimed to "see". Despite green being one of the colors they are least able to recognize, many described it as their favorite color, which De Wilde attributed to their love of the jungle vegetation. Crozet IslandsOceaniaKuruvadweep

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