

SCIENTIA INTERNATIONAL

NOVAS DEL MENSE IN INTERLINGUA

Archeologia.—In un reporto in le jornal *Science* per Dr. E. Estrada del Museo Victor Emilio Estrada in Ecuador e Drs. B. J. Meggers e C. Evans del Institution Smithsonian, le theoria es avantiata que le poteria del prehistoric cultura valdivian in le Americas indica forte influentias asiatic. Le cultura valdivian existeva circa 5000 annos retro in le costas del Pacifico inter California e Chile. Le poteria valdivian es multo simile al poteria del periodo medie Jomon del mesme epocha in Japon. Il es possibile que poteria esseva portate ad Asia a America in vascellos flottante in le Currente de Japon e le Currente de California.

Astronautica.—N. Belasco del departamento de projectiles e astronautica del Compania General Electric in Philadelphia reporta que recente recercas indica que un rigide costume con spisse placas non essera necessari pro proteger le exploratores del luna contra radiation e meteorites. Un modification del costume flexible que es nunc empleate per astronautas va esser sufficiente. Al presente le problema principal es le elimination de excessive calor ab le corpore del astronauta. Ordinariamente e nivello de radiation al superficie del luna non es periculose, sed durante un tempesta solar le radiation monta subito; assi un systema de surveliantia e de albergos de securitate va esser necessari. Al altere latere, special protection contra radiation va esser necessari pro le astronauta durante que ille transversa le bandas Van Allen circa 800 km supra le terra.

Bacteriologia.—Al minus duo species de bacterios pote superviver in le conditiones de atmosphaera e temperatura que es supponite characteristic de Marte, secundo le reporto de Drs. E. Hawrylewicz, B. Gowdy e R. Ehrlich del Instituto Technologic de Illinois. Le bacterios empleate in le experimentos esseva *Klebsiella pneumoniae*, que causa pneumonia lobar, e *Clostridium botulinum*, que causa botulismo. Colonias del duo organismos esseva exponite a varie conditiones de atmosphaera e temperatura, incluse alternationes de temperatura inter le duo extremos de $+25^{\circ}\text{C}$ e -25°C . Al minus un bon parte del bacterios superviveva in omne le simulate conditiones Martianas.

Biologia.—Inter le plantas superior le cucumere es le plus efficace agente pro le conversion del gas letal monoxydo de carbon ad in le innocue bioxydo de carbon.

Genetica.—Dr. G. G. Spellman de Sioux City, Iowa, reporta in le Journal del Association Medical American un serie de casos de parkinsonismo o paralysie agitante que fortemente indica que iste morbo pote esser hereditabile. In un familia le alte incidencia del morbo suggere que illo esseva transmittite como un characteristica dominante.

Inventiones.—Le Corporation Ethyl ha developpate un nove system pro le calefaction de costumes arctic e astronautic. Hydrogeno es extrahite chimicamente ab le aqua exhalate per le persona qui porta le costume. Le hydrogeno passa con oxygeno exhalate via tubos flexible al manos e pedes del costume, ubi special apparatus catalytic combina le gases in un reaction que non es combustion, sed que produce bastante calor pro mantener un temperatura confortabile intra le costume.

Meteorologia.—Como su predecessores Tiros I, II, e III, le satellite Tiros IV que es nunc in orbita ha como su function principal prender photographias de nubes. Le analyse de iste photographias provide datos extrememente utile a meteorologos de tote le mundo proque le satellite pote facer observations de 80 pro cento del superficie del terra ubi existe pauc o nulle

informationes meteorologic conventional. Como su predecessores, Tiros IV porta un camera que coperi un area de circa 1000 km al latere. Illo etiam porta un nove camera que prende imagines multo plus clar de un area minus grande, circa 600 km al latere. Tiros IV transmittite su datos a duo stations al terra, in Point Mugu, California, e Wallops Island, Virginia. Ab iste stations complete analyses del datos es transmittite al National Centro Meteorologic in Suitland, Maryland.

Meteorologia.—Le statunitense Administration National de Aeronautica e Spatio nunc considera un plano de lanciar approximativamente 2000 ballones pro colliger informationes meteorologic. Le ballones essera empleate in conjunction con un systema de satellites artificial. Secundo le plano, le satellites recipera datos ab le ballones que illos passa, e plus tarde transmittera le datos a stations al superficie. Le ballones volera a altitudes de inter 10 e 50 km. In caso de collision con un aeroplano, le ballon essera destruite immediateamente sin darnos al aeroplano. Il es estimate que per medio de iste systema octo satellites pote obtener un complete reporto meteorologic del mundo omne tres horas. Le systema ha le appellation familiar GHOST ab "Global Horizontal Sounding Technique" (Technica de Sondage Horizontal Global).

Pharmacologia.—Un nove droga, discoperite in le laboratorios Burroughs Wellcome in London, se ha monstrate multo efficace in proteger muses contra variola. Iste droga, 33T57 o N-methylisatina beta-thiosemicarbazona, esseva utilisate durante le recente epidemia de variola in Anglaterra, sed le resultados non esseva conclusive. Nunc le droga va esser testate in India e Pakistan. Gracias a programmas de vaccination, variola ha devenite comparative mente rar in Europa e le Americas, sed le mortalitate es alte inter le casos que occorre. In India, Pakistan e altere pais oriental milles de casos—e de mortes—es reportate omne anno.

Psychiatria.—Dr. W. J. Fessel del Universitate California ha proponite un nove theoria que connecte morbos mental con le phenomene de autoimmunitate. In le processos normal de immunitate le corpore produce anticorpos pro combatter substantias alien que invade le corpore. In le processo de autoimmunitate le mecanismos de immunitate es stimulate per substantias que non es alien, sed que pertine al corpore del individuo. Le patiente deveni allergic contra un parte de su proprie corpore. Dr. Fessel signala que su theoria servi a explicar multe anomalitates que ha essite observate in le proteinas del sanguine in patientes mental. A causa del relativemente tardive disveloppamento de certe componentes del systema nerval illos poteva esser apte a evocar le responsa de autoimmunitate. Dr. Fessel etiam declara que su theoria non exclude le importantia de altere factores psychosocial e genetic in le etiologia de morbos mental.

Recercas de Cancere.—Al Instituto Recercari Stanford in Menlo Park, California, plus que 20 nove agentes chimic ha essite synthetisate, le quales se ha monstrate activissime in le destruction de cellulas leucemic in animales experimental. Le nove substantias, nitrosoureas e nitrosoguanidinas, esseva preparate per Dr. L. Goodman e su collaboratores, K. A. Hyde e Drs. E. Acton, W. A. Skinner, J. Greenberg, e B. R. Baker. Le plus active del substantias es chloroethylnitrosourea. Si le nove agentes continua parer promittente post altere experimentos animal, tests in humanos va esser interprendite.

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GENERAL SCIENCE

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