

Martes 9 al lunes 15 de noviembre de 2022

Internacional: 04
Nacionales: 00
Regionales: 04

Del martes 9 al lunes 15 de noviembre de 2022, CICESE fue tendencia periodística debido a diversas investigaciones realizadas por investigadores del centro en revistas científicas, "Nutrialgae" ofrece una solución al problema de la contaminación de los mares compatible con la rentabilidad del campo, Buque Oceanográfico Alpha Helix cambia operaciones al Golfo de México, charla impartida por Guillermo Chin a jóvenes estudiantes del CetMar.



INTERNACIONALES

MDPI
Redacción
11 de noviembre de 2022

State of the Art of Desalination in Mexico

This research paper presents a review of the state of the art of desalination in Mexico, with the aim of clarifying the main challenges and opportunity areas for desalination as the main solution to overcome water stress. First, the current situation and forecasts on the availability of water resources in Mexico are described, followed by the main economic, social, and legislative issues of desalination. Mexico's installed capacity for the different desalination technologies and their evolution in recent years was investigated, followed by a comparison with global trends. The current state of research and development in desalination technologies carried out by Mexican institutions was also studied. The results show that membrane technology plants account for 88.85%, while thermal technology plants account for the remaining 11.15%. Although Mexico presented a 240% increase in its desalination capacity in the last 10 years, it has not been enough to overcome water stress, so it is concluded that in the future, it is necessary to increase its capacity in greater proportion, specifically in the areas with greater scarcity, which can be achieved with the joint participation of academy–industry–government through the creation of autonomous organizations, social programs, and/or public policies that promote it.

[Nota en línea](#)

MDPI

Redacción

11 de noviembre de 2022

Does Domestication Affect Structural and Functional Leaf Epidermal Traits? A Comparison between Wild and Cultivated Mexican Chili Peppers (*Capsicum annuum*)

During domestication, lineages diverge phenotypically and genetically from wild relatives, particularly in preferred traits. In addition to evolutionary divergence in selected traits, other fitness-related traits that are unselected may change in concert. For instance, the selection of chili pepper fruits was not intended to change the structure and function of the leaf epidermis. Leaf stomata and trichome densities play a prominent role in regulating stomatal conductance and resistance to herbivores. Here, we assessed whether domestication affected leaf epidermis structure and function in *Capsicum annuum*. To do this, we compared leaf stomata and trichome densities in six cultivated varieties of Mexican *Capsicum annuum* and their wild relative. We measured stomatal conductance and resistance to herbivores. Resistance to (defense against) herbivores was measured as variation in the herbivory rate and larvae mortality of *Spodoptera frugiperda* fed with leaves of wild and cultivated plants. As expected, the different varieties displayed low divergence in stomatal density and conductance. Leaf trichome density was higher in the wild relative, but variation was not correlated with the herbivory rate. In contrast, a higher mortality rate of *S. frugiperda* larvae was recorded when fed with the wild relative and two varieties than larvae fed with four other varieties. Overall, although domestication did not aim at resistance to herbivores, this evolutionary process produced concerted changes in defensive traits.

[Nota en línea](#)

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Redacción

14 de noviembre de 2022

"Nutrialgae" ofrece una solución al problema de la contaminación de los mares compatible con la rentabilidad del campo

Los ensayos desarrollados en México por Ficosterra, indican que los cultivos tratados con bioestimulantes, elaborados con algas marinas y microorganismos incrementan hasta un 20% más la productividad del cultivo.

[Nota en línea](#)

CICESE EN LOS MEDIOS

MDPI

Redacción

11 de noviembre de 2022

A Novel Strategy for Computing Routing Paths for Software-Defined Networks Based on MOCcell Optimization

Software-defined networking (SDN) is the fastest growing and most widely deployed network infrastructure due to its adaptability to new networking technologies and intelligent applications. SDN simplifies network management and control by separating the control plane from the data plane. The SDN controller performs the routing process using the traditional shortest path approach to obtain end-to-end paths. This process usually does not consider the nodes' capacity and may cause network congestion and delays, affecting flow performance. Therefore, we evaluate the most conventional routing criteria in the SDN scenario based on Dijkstra's algorithm and compare the found paths with our proposal based on a cellular genetic algorithm for multi-objective optimization (MOCcell). We compare our proposal with another multi-objective evolutionary algorithm based on decomposition (MOEA/D) for benchmark purposes. We evaluate various network parameters such as bandwidth, delay, and packet loss to find the optimal end-to-end path. We consider a large-scale inter-domain SDN scenario. The simulation results show that our proposed method can improve the performance of data streams with TCP traffic by up to 54% over the traditional routing method of the shortest path and by 33% for the highest bandwidth path. When transmitting a constant data stream using the UDP protocol, the throughput of the MOCcell method is more than 1.65% and 9.77% for the respective paths.

[Nota en línea](#)

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REGIONALES MR

Alfredo Alvarez.mx

Redacción

9 de noviembre de 2022

Sigue la posibilidad de lluvias ligeras

La Coordinación Estatal de Protección Civil en colaboración con el CICESE informan el pronóstico para este día en Baja California, en el que la influencia de un sistema de baja presión con el remanente de un frente frío que pasó sobre la región, está generando, en la mañana nubosidad baja con un descenso en las temperaturas y posibilidad de lluvias ligeras aisladas, en el resto de la tarde-noche, cielo despejado con algunas nubes bajas y temperaturas de frescas a agradables.

[Nota en línea](#)

CICESE EN LOS MEDIOS

Uniradio informa
Redacción
11 de noviembre de 2022

Buque Oceanográfico Alpha Helix cambia operaciones al Golfo de México

Tomando en consideración que en el Pacífico mexicano no hay proyectos de investigación que dispongan de recursos para pagar tiempo de uso de barco y, en contraparte, sí los hay en el Golfo de México, el Buque Oceanográfico Alpha Helix (BOAH), propiedad del CICESE, cambió sus operaciones hacia aquella región, estableciendo su puerto base en Tuxpan, Veracruz, por tiempo indefinido.

[Nota en línea](#)

También publicada en: [El Vigía](#)

El Vigía
Karla Padilla
15 de noviembre de 2022

Joven científico invita a estudiar Ciencias a alumnos del CetMar

Con la intención de motivar a los jóvenes a estudiar alguna carrera relacionada con la ciencia y eliminar los estigmas de que los científicos son aburridos o personas mayores, el Club de Ciencias del Centro de Estudios Tecnológicos del Mar (CetMar) 11 organizó la charla "Buscando señales de vida en un océano extraterrestre".

[Nota en línea](#)

El Vigía
Karla Padilla
15 de noviembre de 2022

No hay programa para las ciencias

La falta de programas que impulsen las vocaciones científicas y el desconocimiento de los padres de familia para apoyar a sus hijos en este tipo de carreras ocasionan que los jóvenes no quieran o no decidan estudiar una carrera relacionada con las ciencias.

[Nota en línea](#)