



"If something
is important
enough
you should
try even
if the
probable
outcome
is failure"

Elon Musk

The Review for the
month is with
Fridolins #6417

The Animal for the month
is called **Axoltl**



EDITOR'S NOTE

After the Regional, we are all stuck in our houses. As FMWill, we thought "how can we work more efficiently?" Here we are with the first issue of "Insight": **The capacity to gain an accurate and deep understanding of someone or something.** We wanted to make a series of magazines where you can have fun while reading and also learn new information. We had a lot of fun preparing it, cheers!

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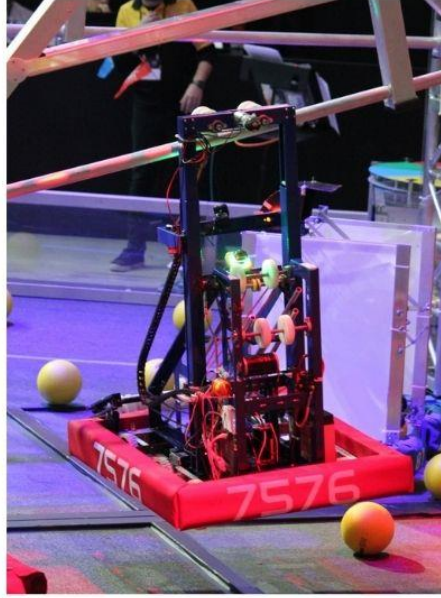
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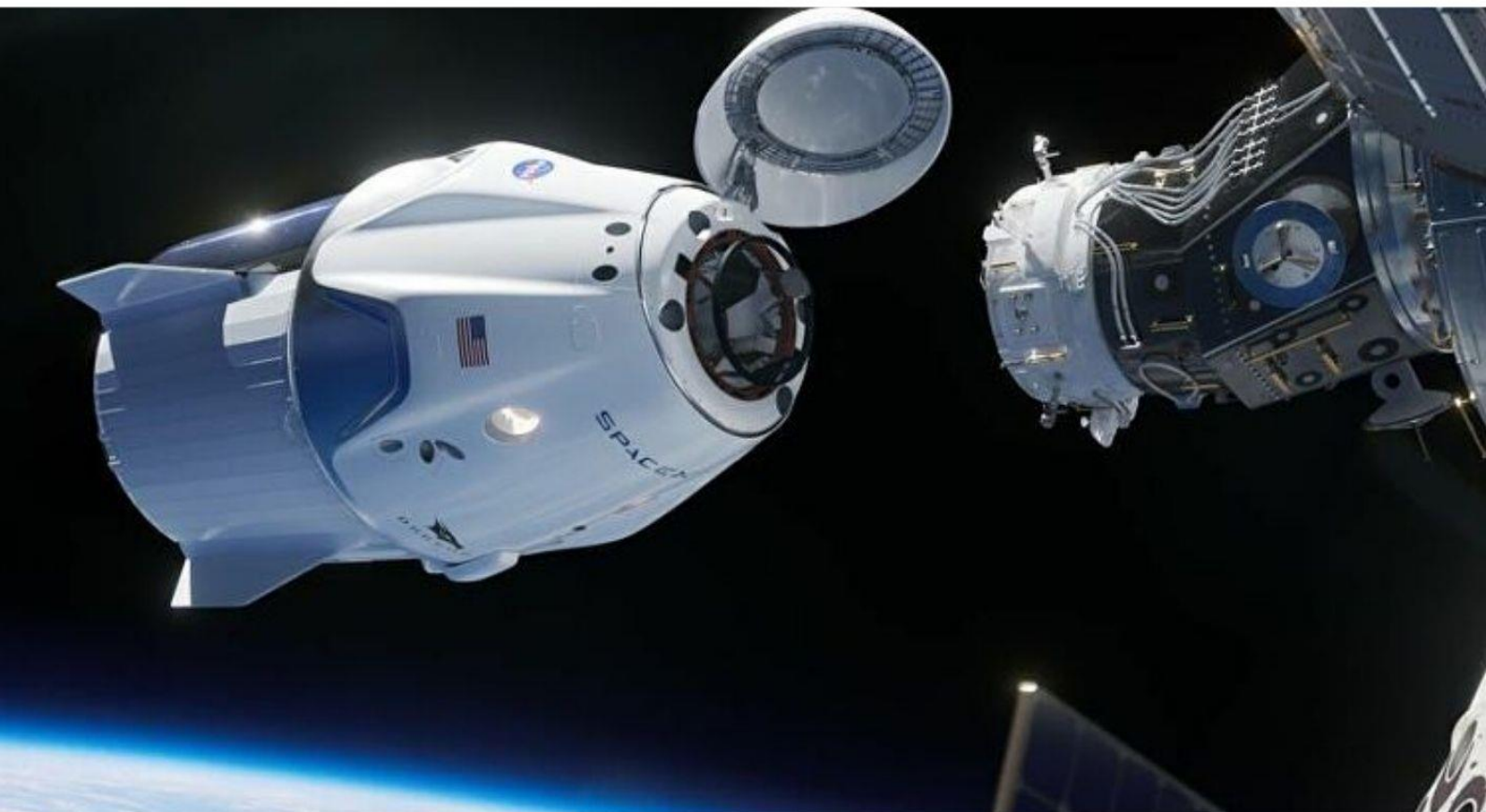
DRAGON 2

SpaceX

Hello everyone! Hope you're all doing well, hope you're all happy and healthy. After the launch of the first SpaceX Dragon 2 spacecraft, we decided to make it our main topic this month. These pages will include general information about SpaceX Dragon2 and frequently asked questions about crew dragon!

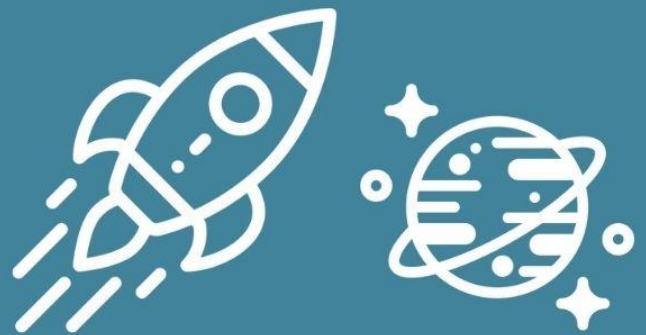
“ About SpaceX Dragon 2

The SpaceX Dragon 2 is a class of reusable spacecraft developed and manufactured by American aerospace manufacturer SpaceX as the successor to the Dragon cargo spacecraft. It has 2 variants: Crew Dragon and Cargo Dragon. Crew Dragon is where the astronauts stay during the journey and it has the capacity for 7 astronauts. Cargo Dragon is the updated replacement for the original Dragon spacecraft.





“The Dragon spacecraft is capable of carrying up to 7 passengers to and from Earth orbit, and beyond. It is the only spacecraft currently flying that is capable of returning significant amounts of cargo to Earth, and is the first private spacecraft to take humans to the space station.” says SpaceX on their website. Crew Dragon’s first non-piloted flight happened on March 2019. Its first crewed flight happened in the previous days, on May 30, 2020.



The SpaceX Crew Dragon, along with the Boeing CST-100 Starliner, will provide roundtrip crew transportation services to the International Space Station and return the ability to launch humans into space from United States as part of NASA’s Commercial Crew Program.

Frequently Asked Questions About Crew Dragon



Is the crew Dragon reusable?

Yes, it is reusable.

How does Dragon dock with ISS?

Crew Dragon has an automatic docking system, which uses a series of sensors and cameras to help the vehicle approach the ISS and then grab on to an existing docking port.



How does the crew Dragon land?

SpaceX plans to land the rocket on a drone ship called "Of Course I Still Love You", which will be stationed in the Atlantic Ocean off the coast of Florida. In order to stick the landing, the rocket must execute a flip maneuver before firing its engines for a boost-back burn and entry burn.

What are the astronauts there to do?

The spacecraft that is designed to carry astronauts have to go through a process that ensures they can operate safely. This launch is essentially the final step in that validation process. Astronauts Behnken and Hurley are testing the Crew Dragon's environmental control system, the displays and controls and the maneuvering thrusters. The spacecraft docked with the International Space Station on May 31, less than a day after making history as the first human orbital spaceflight from the United States in nearly nine years. Dragon 2's approach to the ISS went smoothly, with docking taking place nearly 15 minutes ahead of schedule. "It's been a real honor to be just a small part of this nine-year endeavor since the last time a United States spaceship has docked with the International Space Station" said astronaut Douglas Hurley, after docking.

Let me give you a little information about the 2 astronauts of Crew Dragon

FORM



FORM

ROBERT BEHNKEN

Robert Louis “Bob” Behnken is a NASA astronaut, engineer and former Chief of the Astronaut Office. Behnken holds a Ph.D in mechanical engineering and the rank of colonel in the U.S. Air Force, where he served before joining NASA . Behnken was selected as an astronaut by NASA in 2000 and is a veteran of two space shuttle flights.

He flew STS-123 in March 2008 and STS-130 in February 2010, logging more than 708 hours in space, and more than 37 hours during six spacewalks. He is currently serving as Joint Operations Commander on the first crewed flight of the SpaceX Crew Dragon.

After docking with the International Space Station on the second day of the mission, Behnken also joined Expedition 63 as a flight engineer.

DOUGLAS HURLEY

Douglas Herald Hurley is an American engineer, former Marine Corps pilot and current NASA astronaut. He was selected as an astronaut in 2000. A veteran of two spaceflights, he was the pilot of on STS-127 and STS-135. Hurley holds a Bachelor of Science in Civil Engineering from Tulane University. Before joining 2008 and STS-130 in February 2010, logging more than 708 hours in space, and more than 37 hours during six spacewalks. He is currently serving as Joint Operations Commander on the first crewed flight of the SpaceX Crew Dragon. After docking with the International Space Station on the second day of the mission, Behnken also joined Expedition 63 as a flight engineer.



TEAM #6417

ALL ABOUT FRIDOLINS ROBOTICS!



" IT'S AN INTERESTING JOURNEY BECAUSE
WE ARE THE FIRST TEAM FROM
SWITZERLAND."

Could you tell us about your team's past?

WE TALKED WITH TIM ABOUT FRIDOLINS!

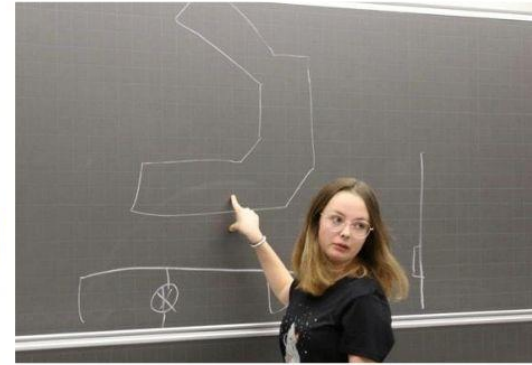
It's an interesting story because we are the first team from Switzerland. A guy from our school did an exchange year in America and got into a robotics team there, and he enjoyed it very much and he had the dream to found a team in his hometown. He was in a family with a lot of influence, they talked to the principle so they have actually made this team in 2016.

Won the regional in 2017 even tho it was a very simple robot. When we went to America to the finals we obviously didn't win but it was a great experience and winning the regional was a boost for us because we could say we won to the media even tho it probably because of our robot.

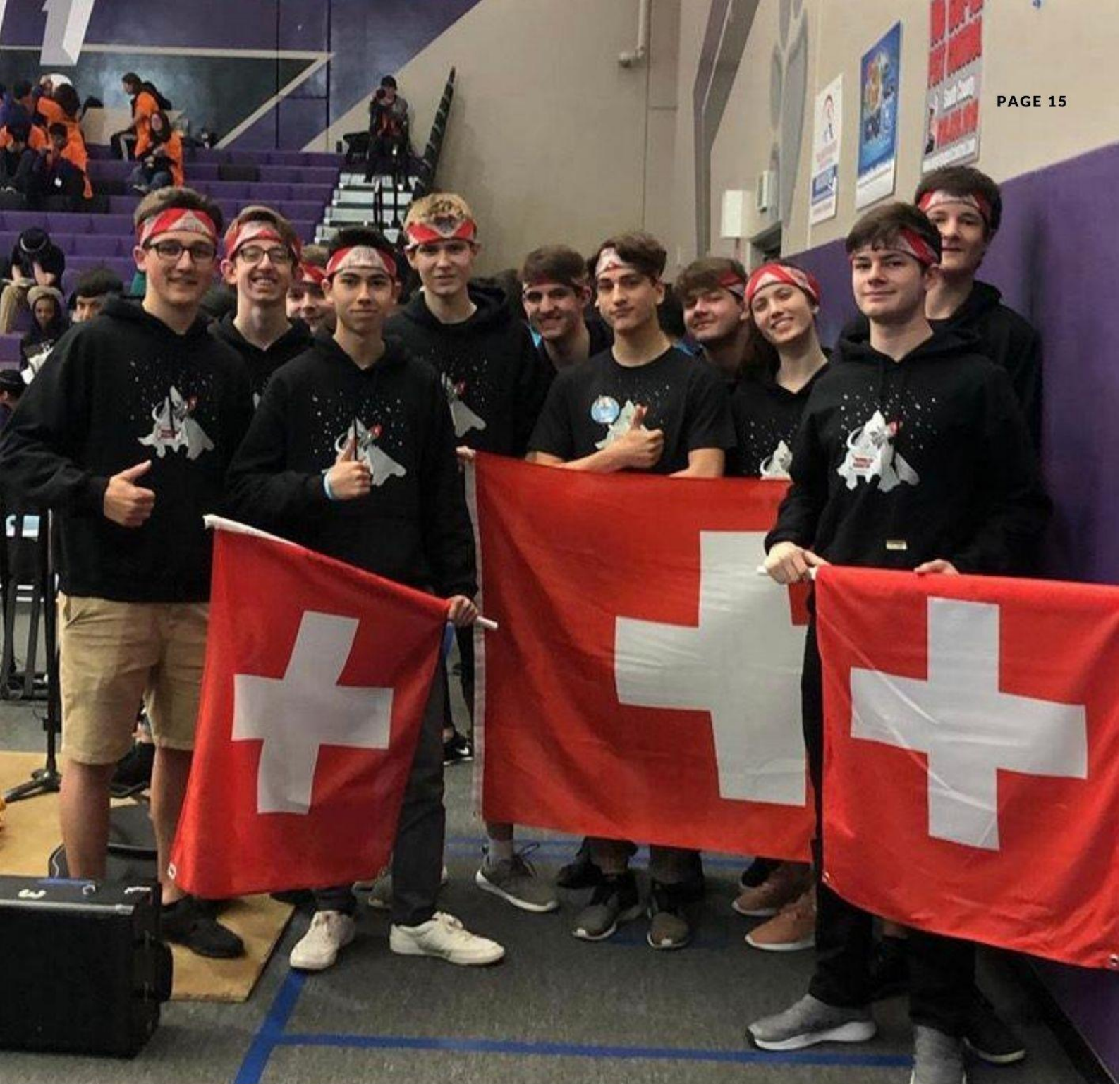
We started asking apprentices to join the team so in 2018 our team was half student and half apprentices which came out as a great combination



What were your experiences in Turkey?



There were a lot of experiences, it was a lot of fun. Some of the highlights were when we entered the arena because it was huge compared to the ones in America, we really liked it. The second highlight is that we have played a lot better when we compare with the previous years. Another thing is that in Turkey there a lot of rookie teams so it was not as difficult as we expected it to be. The third one is probably just the outside of the competition. It's a beautiful country, it is very different from Switzerland and it was interesting and great even tho some of us spent less time in Turkey.



Is there any differences between Turkish Regionals and America Regionals?

The arena was different in the size, in Turkey, EVERYONE was dancing even the referees were and we really liked that. One thing we disliked was the streams. I would have preferred a not zoomed camera to have a better view but everyone's opinion is different. In american regionals, we have one camera that shows all the filed but Turkey didn't have that. Overall most of the things were similar to America's regionals.

HOW DO YOU CHOOSE YOUR TEAM MEMBERS?

Anyone who wants can basically join but you can not just choose your role on the team. If you're a first year you mostly won't be cat lead but you get to be on the team if you want to. The problem that we don't have enough people is definitely a bigger one than having a lot of members i think. Each year we lose more members than we gain. So we also have some plans to get new members.

WHAT ARE YOUR FUTURE PLANS FOR THE TEAM?



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I can only tell you what I would like to be our plans. One thing is a bigger sponsorship. So we have a milling machine in our workshop the accuracy and precision is horrible. I would really like a better one. Bigger sponsors considering we are still the only Swiss team, we have the whole country sponsorship for us basically but we don't use it. We only use some sponsorships of our state. So a dream is to get bigger sponsors. Then another one is more members with advertising our team and maybe getting more Swiss teams up and running, show them what FRC is. Make a video and in general, get new teams running.



DO YOU HAVE ANY SUSTAINABILITY PLAN IN ORDER TO KEEP THE TEAM RUNNING WITHOUT THE ORIGINAL MEMBERS?

No we don't. In Switzerland robotics is not a subject that you have in school. We do everything in our free time that is also why its difficult to get people on the team. Many parents and teachers think its a bad idea, because grades will drop down. , Robotics is just a season for us, then it's done. We don't see each other for half a year then. When its pre-season we come back I think thats exactly the reason why we should have something like this.



FIRST REVIEW



FIRST®

Some important
things about
FIRST

**FIRST GAME
CHANGERS,**
powered by Star
Wars: Force for
Change

“IT’S TIME TO BE A GAME CHANGERS”

Lucasfilm and Parent Company Disney Have teamed up once again with FIRST to inspire the next generation of heroes and innovators as part of the Star Wars: Force For Change is part of the Walt Disney Company’s commitment to providing today’s youth with inspiration and opportunity through transformative programming. Disney has been a proud supporter of FIRST for more than 20 years.



We compiled opinion quotes and opinions from forums where everyone predicted changes to be made in line with their own ideas.

Also maybe it's actually just Infinite Recharge without control panel? That's changing the game for the better one.

"Welcome to the 2021 FIRST Robotics Competition Season and this year's game: Cure Creators. A pandemic has befallen FIRST City and it is up to teams and their med-bot companions to develop effective medication and deliver it to the city's citizens before they must all self-quarantine for 14 days..."

Maybe we will only be able to do certain things at certain times.

Everyone think that it can be infinite recharge 2.0

20201 Game – FIRST Blast from the Past: 2020 Edition.

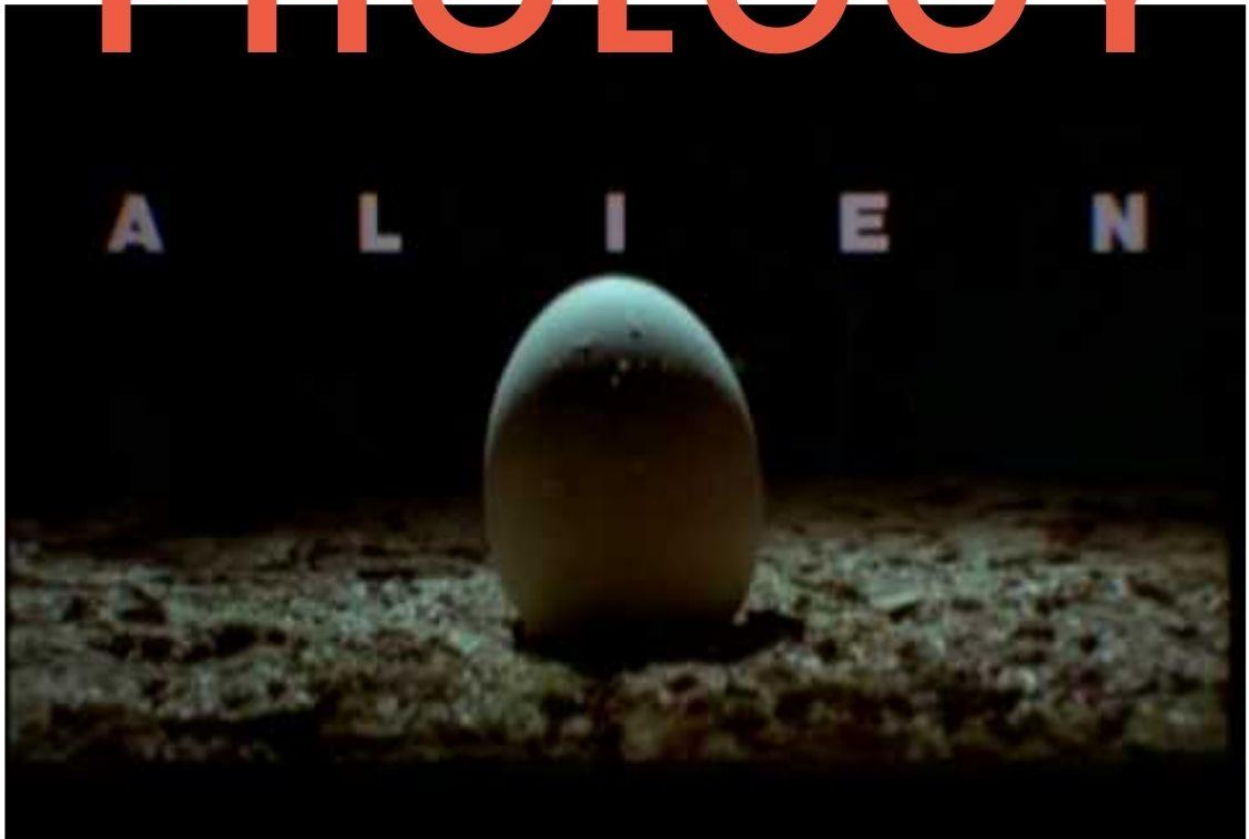
By the way someone want the FRC game name not the Season "idea".

The Walt Disney Company is committed to providing today's youth with inspiration and opportunity through transformative programming and has been a proud supporter of the global PreK-12 nonprofit organization, FIRST, for over 20 years. For a second year, Lucasfilm and parent company Disney are excited to team up with FIRST to inspire the next generation of heroes and innovators as part of Star Wars: Force for Change philanthropic initiative.

umor has it that the 2021 "Game Changers" season will be revealed, with several changes to the "Infinite Recharge" theme introduced in the 2020 season.



XENOMORPHOLOGY



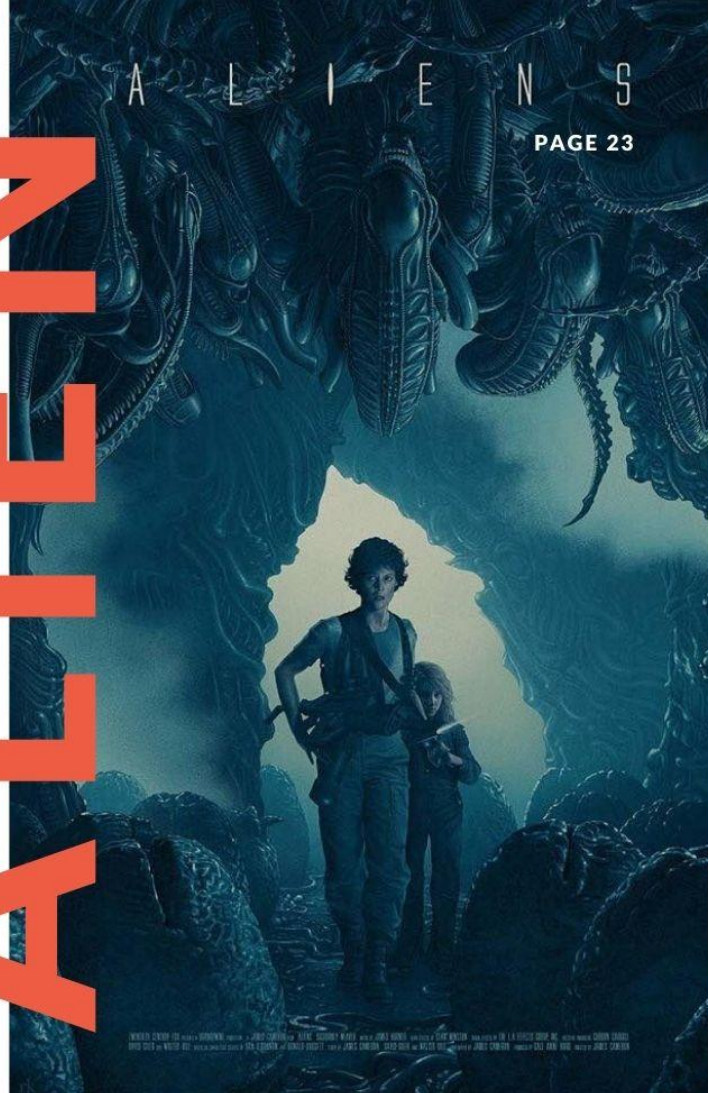
DIRECTOR: RIDLEY SCOTT

When we think about space one of the first thing that comes to mind of any movie geek is the xenomorph from the cult classic Alien(1979).This movie is a colossal landmark in pop culture, from their acid blood to facehuggers I wondered can then be real?

Screenwriter Dan O'Bannon mentioned in an essay quote "I patterned the alien's life cycle on real parasites. Parasitic wasps treat caterpillars in an altogether revolting manner,the study of which I commend to anyone who is tired of having good dreams."

With that I started my research and yes,dan was right.During my research came across Cortesia Glomerata(lays it's eggs inside of an caterpillar which start to consume the caterpillar inside out then the bugs start to burst from the caterpillars body,an other wasp I found was called the Rhyssa Persuasoria(Meaning Persuasive Burglar) which Ridley Scott(The creator of the movie) talked about in an interview.

NEW FLOW



Rhyssa Persuasoria use it's ovipositor to lay eggs in wood's for food supply and incubation. The last bug I was able to connect to the xenomorphs was the Tarantula Hawk they paralyze the tarantula than they lay eggs in to the tarantula, while the egg hatches into a larva the larva starts to devour the tarantula from inside out when the tarantula is still alive. The Alien is considered is an sci-fi horror movie but what I think is there's tons of things here on earth that terrify me more than a xenomorph could ever do.

The axolotl (*Ambystoma mexicanum*) also known as the Mexican walking fish, is a neotenic salamander related to the tiger salamander. Although the axolotl is colloquially known as a "walking fish" it is not a fish, but an amphibian.

THE AXOLOTL

AMBYSTOMA MEXICANUM

The species was originally found in several lakes, such as Lake Xochimilco underlying Mexico City. Axolotls are unusual among amphibians in that they reach adulthood without undergoing metamorphosis. Instead of developing lungs and taking to the land, adults remain aquatic and gilled. Axolotls should not be confused with waterdogs, the larval stage of the closely related tiger salamanders which are widespread in much of North America and occasionally become neotenic.



Neither should they be confused with mudpuppies, fully aquatic salamanders that are not closely related to the axolotl but bear a superficial resemblance. As of 2010, wild axolotls were near extinction due to urbanization in Mexico City and consequent water pollution, as well as the introduction of invasive species such as tilapia and perch. They are currently listed by CITES as an endangered species and by IUCN as critically endangered in the wild, with a decreasing population.

“

AXOLOTLS ARE USED EXTENSIVELY IN SCIENTIFIC RESEARCH DUE TO THEIR ABILITY TO REGENERATE LIMBS. AXOLOTLS WERE ALSO SOLD AS FOOD IN MEXICAN MARKETS AND WERE A STAPLE IN THE AZTEC DIET. AN AXOLOTL RANGES IN LENGTH FROM 15 TO 45 CM. THEIR HEADS ARE WIDE, AND THEIR EYES ARE LIDLESS. THEIR LIMBS ARE UNDERDEVELOPED AND POSSESS LONG, THIN DIGITS. AXOLOTLS HAVE BARELY VISIBLE VESTIGIAL TEETH, WHICH WOULD HAVE DEVELOPED DURING METAMORPHOSIS.

”

DİLHAN ERYURT

She was born on the 29th of November 1926 in İzmir. His father is Abidin Ege, Denizli Deputy who entered the parliament in 1944.

In 1959 she went to Canada for two years with the scholarship of the International Atomic Energy Agency. She worked with Alastair G. W. Cameron at the Deep River Atomic Energy Laboratory. She worked on hydrogen stars and wrote many successful programs on the structure models of the stars.

Then she went to the USA and first worked at Indiana University in the USA with the scholarship of the American Soroptimist Federation. She knew how to make star models at the Goethe Link Observatory of the University. She worked with Professor Dr. Marshall Wrubel. After this experience, she received a scholarship from the National Academy of Sciences and worked at the Goddard Space Research Institute of NASA. She was the only female astronomer working at the institution during her mission at the Goddard Space Research Institute, which did theoretical research on spaceflight.



She declared that the Sun was brighter and hotter in the past. Thus, she confuted the idea of the Sun gets brighter and hotter. Her scientific researches were important enough to affect the space programs. She was awarded the Apollo Peace Award in 1969 because of her successful works for the first Moon landing. In Goddard Institute, Eryurt kept working as a senior research scientist after she completed 2 years of successful researches. Institute sent her to California University for more advanced research in the development of stars. Eryurt and Cameron's article about the impact of mass in stellar evolution took many citations.

She came back to Turkey in 1968. She was an assistant professor at the Astrophysics Department of Ankara University. She completed her doctorate and associate professorship studies with Egbert Adriaan Kreiken. Her doctorate thesis' title is "Some results of a spectroscopic study of the atmosphere of 31 Cygni"(1956). Her associate professorship thesis' title is "The density gradient in the atmosphere of the K-type component of the Cygni 31"(1961). Those theses are among the first published papers about astrophysics in Turkey. During her time in METU as a visiting professor, she started astrophysics classes at University. She started the establishment process of the National Astronomy Congress and organized the first National Astronomy Meeting with the help of TUBITAK.

She had a break of her job in METU between the years 1969 and 1973 in order to continue her scientific researches at NASA. She turned back to METU Physics Department in 1973 and established the Astrophysics Department. In 1977 she was awarded the TUBITAK Science Service and Incentive Award. After working as a head of the department of physics for 6 months, she became the dean of the faculty of science and literature. She played an important role to establish a star observatory in METU in 1991. Eryurt, who published 46 articles in English and 13 articles in Turkish between 1956 and 2009, retired in 1993. Eryurt was elected as an honorary member of the Turkey Science Academy.

She passed away at Ankara on 13th of September 2012. Because of a heart attack.