



30th Anniversary of Apollo 11 Moon Landing, July 20, 1969

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July, 18, 1999 Titusville, Florida Associated Press reports from Moscow, Russia that locust swarms have been eating crops across Russia's southern border at the speed of about 31 miles a day. The insects moved into Russia from Kazakstan where government authorities usually have teams to kill locust swarms. But this year, Kazakstan claims it did not have enough money to handle the infestations. Farmers are appealing to the Russian government for insecticides and financial aid. The Russian Emergency Situations Ministry says it needs at least \$12 million to battle the locusts.

Across the globe to the United States, farmers in North Texas are trying to cope with hordes of grasshoppers that could get a lot worse. Allen Knutson, a Texas A&M University entomologist said this year's infestation "will be a bumper crop." There was an outbreak last year and grasshoppers build over three to five year periods as adults lay increasingly more eggs. This past mild winter protected the eggs. Will it grow into a plague of Biblical proportions like the period between 1984 and 1987? That was the last and biggest major grasshopper plague in the U. S. when grasshoppers covered an area the size of Kansas. More than 55 million acres were devoured in the mid 1980s, forcing farmers in 17 states to buy feed for cattle and sheep.

If it gets really bad this year, the Agriculture Department might spray from military jets. But so far, authorities this year are advising farmers to mow down weeds near crops and to use chemical sprays.

Another kind of pest is also spreading in the Mediterranean off the coast of France. It's a green algae that is threatening to kill off much of the marine life and fishermen, environmentalists and divers have now lodged a formal complaint with the French government. Ecologists argue that unless stopped, the green algae could permanently alter the natural balance of the Mediterranean. A French Gaullist MP, Pierre Lellouche, told reporters: "If France does not take severe control measures, it will be legally attacked by neighboring countries whose coasts are now colonized by the uncontrollably spreading algae." So far, no one has come up with exactly how to get rid of the algae except perhaps a species of marine slug which might eat it up. Why France is not acting urgently to fight the green algae's spreading in the Mediterranean is also unclear.

Now, on to space. Exactly thirty years ago on July 16, 1969, Astronauts Neil Armstrong, Buzz Aldrin and Michael Collins had blasted off in Apollo 11 from Cape Kennedy to become the first crew to land on the moon. Recently I talked with one of the Boeing engineers who helped build the Launch Support System for the Apollo Program. Bob Davis worked for Boeing from 1957 into the 1980s. He is now 66 years old and President of EPrime Aerospace Corporation in Titusville, Florida. He wants EPrime to launch commercial satellites from Cape Canaveral and Kodiak Island, Alaska so the U. S. can compete with France, China and Russia - foreign nations that have been dominating the commercial satellite launch business.

On this anniversary of Apollo 11, I asked him what he worried about most in the

countdown to launch on April 16, 1969.

Interview:

Bob G. Davis, former Boeing Apollo Program engineer and current President, E' Prime Aerospace Corp, Titusville, Florida: "The biggest thing was the hold down arms - that they would function properly and would release - there were 4 of them and that they would all release at the same time.

AND IF THEY DIDN'T, WHAT WOULD HAPPEN?

Well, the rocket would be pulled to one side and would probably blow up.

DO YOU REMEMBER ANY MOMENT WHEN YOUR HEART CAUGHT BECAUSE IT WASN'T CLEAR IF THOSE FOUR ARMS WERE LETTING GO AT THE SAME TIME?

Yes, the minute the fire started coming out the bottom! (laughs) You know, you get a lump in your throat. It's hard to swallow because and hard to breathe because that's the moment that you've been working all these years and it's all in just a few seconds! You know, it's going to be success or going to be failure. There's nothing in between.

AND ONCE THEY WERE DOWN THERE, WE'VE ALL SEEN THEM GOING AROUND PLANTING THE FLAG AND GOING AROUND IN THE ROVER

By the way, Boeing built the rover.

WHAT WAS THE FEELING WHEN YOU SAW THAT MOVING FOR THE FIRST TIME ON THE MOON?

Goose bumps. You know, you spend several years working on this project and all of a sudden it's all happening.

CAN YOU GUARANTEE THE AMERICAN LISTENERS THAT IT WASN'T DONE IN A TV STUDIO IN ARIZONA SOMEWHERE?

No, ma'am, it wasn't done in a TV studio. There's a lot of people who believe that, though.

BUT YOU KNOW FOR A FACT THAT THAT WAS ROLLING AROUND ON THE MOON?

Yes, ma'am, I sure do! (laughter)

WHAT WAS THE NEXT BIG DANGER?

You had to leave the surface of the moon at a specific time so you would rendezvous at the right moment with that command module. You also had only so much fuel to get from there on the moon's surface up to docking with the command module. So, that was critical. And then they had to do all the maneuvering to get rid of all of that excess hardware they no longer needed and then to turn the command module around. All of that was critical on the way back to earth.

WAS THERE A POINT WHEN THEY GOT BACK IN THE LANDER THAT ALL OF YOU WHO ACTUALLY WERE INSIDERS KNEW WERE TREMBLING ABOUT WHETHER OR NOT THEY COULD END UP BEING BOUND TO THE MOON FOREVER?

That was always in the back of our mind. I'm sure it was in the back of their mind. That's what made those guys what they were. They were ... test pilots. They

THEIR COURAGE WAS AMAZING.

Right. Right. They knew all - when they left, they knew everything. It takes a certain type of a guy to crawl into a capsule as small as that thing was and cramped to start out on that 4 day journey.

KNOWING...

Yeah, knowing you may not come back. (laughs)

AND SO IF THEY HAD MISSED THE FIRING ON THE MOON BY A FEW SECONDS,

Yeah, they would have missed - they wouldn't have had enough fuel to dock! And if you can't dock - the escape module can't return to earth. The command module is the only thing that can come back to earth. And he only had so much fuel, too. He had had to turn that around on the way back to earth and they had to slow it down. Otherwise, you'd hit the earth's atmosphere and you would bounce off and the whole crew would be stranded in space around the earth.

SO ON THE MOON, NEIL ARMSTRONG KNEW THAT HE HAD ONLY A FEW SECONDS TO HIT IT JUST RIGHT OR THEY WOULD HAVE BEEN ON THE SURFACE OF THE MOON FOREVER?

No, they would have been in orbit forever. They would have gotten off the face of the moon, OK.

AND NOT BE ABLE TO GET BACK DOWN.

No.

BECAUSE THEY WOULDN'T HAVE HAD ANY FUEL?

No, they'd have been in orbit around the moon.

WHAT A FATE.

Yeah. Yeah. The key was from the surface of the moon, they had to get up at the right time - let's say they just took off anytime they wanted to and the command module was on the back side of the moon. Well, obviously there is not enough fuel on board for them to catch up with each other.

SO THEY WOULDN'T HAVE BEEN ABLE TO LAND AND THEY WOULDN'T HAVE BEEN ABLE TO GET TO THE MODULE OR TO EARTH?

No, they would have been in that escape module forever.

WHY DO YOU THINK THE APOLLO PROGRAM CAME TO AN END AND WE HAVEN'T BEEN BACK TO THE MOON?

Priorities. I think, and money.

IT WOULD SEEM THAT ESTABLISHING SOME KIND OF A LABORATORY BASE ON THE MOON IN THAT LOW GRAVITY THAT IT HAS TO MANUFACTURE A VARIETY OF THINGS FROM METALLICS TO PHARMACEUTICALS WOULD HAVE BEEN IN THE INTEREST OF THE UNITED STATES...

You are 100% correct. And see that's what we all thought was going to happen. But we weren't in charge of it. The scientists weren't in charge. If the scientists had had their way, we'd already been on Mars. And then some.

AND HAD A BASE ON THE MOON?

Oh, yeah."

More Information:

I have an Associated Press story dated July 20, 1969 on the front page of *The Sun-Telegram* newspaper in San Bernardino, California. The headline is: "Apollo 11 Passes Tests for Moon Landing Today." July 20th was the day Armstrong and Aldrin took the lander down to the moon's surface. While orbiting, the astronauts had reported back to Space Center, Houston an observation which seems to have been lost in the mists of time and is worth repeating:

July 20, 1969, *The Sun-Telegram*, San Bernardino, California:

"Armstrong and Aldrin reported sighting some mysterious lunar lights

in an area where some scientists believe there are volcanoes. Armstrong and Aldrin found the mysterious bright spots on the inner wall of a crater far to the north of the spacecraft's flight path on its first sweep around the moon.

'It seems to have a slight amount of (white) florescence to it,' said Armstrong. 'The area in the crater is quite bright.'

The crater was Aristarchus, in the northeastern part of the moon's face. Some astronomers have claimed observing bright spots in that area which some scientists have said appear to be volcanoes.

'That area is definitely brighter than anything else I can see,' said Aldrin. 'There doesn't appear to be any color involved in it.'

When you think of volcanoes, you think of red lava. So, what was the bright, fluorescent light without color that the Apollo 11 astronauts saw in the moon's Aristarchus crater? Did they photograph from the Command Module? If so, where are those photographs? Did the Defense Department's Project Clementine that photographed and mapped the moon a couple of years ago photograph any more lights? When will we go back to the moon and land again?

To learn more about Bob Davis's E'Prime Aerospace Corporation efforts to launch satellites, visit their web site at **www.eprimeaerospace.com**. To report stories from your local communities or to ask questions, e-mail: **earthfiles@earthfiles.com** or FAX me at 215-491-9842.

Websites:

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Credits

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