# Mars trip design

(Continued from page 1) sources," the associate professor pointed out.

communications, navigation, air traffic control, meteorology and astronomy.

The shuttle for moving men, equipment and supplies to the station and back was designed to carry at least a crew of two, six passengers and 50,000 pounds

Station design incorporated 16 self-contained and sustaining capsules 48 feet long and 10 feet in diameter attached at one end to a 115-foot long central tunnel.

Design of the earth-to-Mars command ship was centered around two Phoebus II nuclear rocket engines capable of 500,000 pounds thrust each, The 176-foot long craft includes—from nose to rocket nozzles-a command module, spoked-wheel-type crew quarters, Mars landers storage, five 120-foot long fuel containers and the shielded engines.

"The mother ship is the primary vehicle on this mission in that it must carry the most life the longest time to the farthest distance," the report states. Thus all environmental control, life support and power systems "must be as perfect as possible with at least triple redundancy.'

The student unrest and violence

which started in Berkeley, Cali-

fornia in 1964 as a "free speech"

movement is predicted to go into

a new and even more dangerous

phase following the Kent State

I am not an authority on who

was right or who was wrong at

Kent State. I'm not a National

Guardsman who has to live with

the fact that he killed a young

student, nor am I a father who

But I don't think violence is

Except for one article by a

anger and a means of making a stab at President Nixon and the

I don't have the space to dis-

cuss the whole book, but there

are some parts which I think

Bill Warren, who edited the

book, wrote mainly on the im-

morality of having ROTC on cam-

pus, along with a professor who

does is make "cannon-fodder out

and Vietnam, along with the log-

ical and, in most cases, the illogi-

cal reasons why we shouldn't be

Yet, most of the people who

are questioned concerning the stu-

dent unrest say they feel the stu-

dents have a right to state their

government if they wouldn't re-

with the people, one must not

underestimate their understand-

ing. One must not everlastingly

keep them on leading strings . . .

No organization, no propaganda,

however excellent, can alone main-

tain confidence in the long run.

It is not by incitement . . . and

not by threats against the help-

less part of the nation, but only

by talking things over with peo-

ple that confidence and devotion

of unbeknownst young men."

warrant commenting on.

has to bury his slain child.

the answer to anything.

"establishment."

there.

incident.

Two Mars landers carrying four men and associated equipment each were designed. These would descend from the mother ship's 100-mile high Mars parking orbit to separate points on the Martian

"This method will give more information than one big lander and insure that all would not be lost if something happened to one of the landers," the students

The Mars lander was designed along lines of the Apollo lunar lander, except the 38-foot tall vehicle is streamlined to contend with Mars' thin atmosphere. The landing frame and descent engine serve as the launch pad for the lander's return to the mother ship. Surface living quarters are incorporated in the stage to be left

A command ship trajectory was selected that would carry it beyond the orbit of Mars, enabling collection of data on the asteroids that orbit between Mars and Jupiter.

"Another reason for this trajectory," the report states," is that by proper selection of transearth insertion data, the ship would pass near Venus for additional investigations on the return

The rights of free speech, free

press, and the right of assembly

are basic and guaranteed free-

doms in this country and student

radicals should use them instead

of violence. When a march, dem-

onstration, or rally turns into a

destructive mob those people are

in the wrong and other people

Several students and faculty

members at Kent State wrote In

the Middle of the Country, a short

book on what they felt were the

events of the "massacre" at Kent

ROTC is offered on campuses

is up to the individual to decide

if he wants to take military sci-

ence courses in college and not

some other students who are

"concerned" about their "unbe-

ROTC because they think the

courses are detrimental to a stu-

dent, but because ROTC is part

of the military structure of the

ment, which the authors attack

that the students who went on a

rampage and smashed windows in

Kent, Ohio were "keepers of the

A student or any other person

may have a belief or an opinion

which is different from everyone

else's. People will listen to them

in a calm and civilized manner,

time to join together in fraternal

friendship and respect for all our

fellow countrymen, to avoid dis-

turbing the labors of serious men

The above quotation is part of

a speech in the book The Rise and

Fall of the Third Reich by W. L.

Shirer. The speech was made by

Franz von Papen in a last ditch

power in Germany. Many parts

and to silence fanatics."

Student radicals aren't against

knownst" fellow students.

strongly in their book.

national conscience."

should hold them responsible.

Pat Little

Outlet for anger

professor who was against the for students who wish to serve use of violence, the book was their military obligations as an mainly an outlet for the student's officer in the Armed Forces. It

wrote that the only thing ROTC United States and our govern-

Major points of attacks

Of course the major points of professor who claims in the book

their attacks concern Cambodia In the Middle of the Country,

opinion about the war and the when they discuss their beliefs

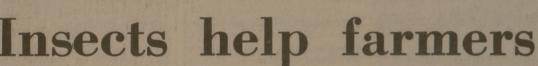
sort to violence. I would venture but when they resort to violence

to say this is the opinion of the the primitive emotions of a per-

majority of the people in the son take over and the actions on United States, in contrast to the both sides become irrational.

How to get close contact

"If one desires close contact fidence to give away . . . It is



Farmer's hopes can depend on outcome of this fight

Aphid lion, right, closing in for the kill on cottonboll worm

(Continued from page 1) Chel W. Lew worked a year with 50 different shell systems, materials and means of flowing them together with the filler liquid to form the tiny eggs.

Batches of the synthetic eggs are being experiemented with at the laboratory and researchers are now working with the seventh generation of aphid loans reared on them, House said.

Rearing the larvae on artificial

eggs would mean a cost reduction to \$1 an acre including the distribution cost.

House said that in the future an artificial egg will possibly be used to keep a large number of aphid lions in the fields after the number of bollworms have decreased due to their elimination by the aphid lions as well as other natural causes.

He explained that both insects have a life cycle with the aphid lions closely following that of the bollworms. When the number of bollworms decreases the eggs will enable the number of aphid lions to remain at a peak to be ready when the number of bollworms rises again.

Plans are being drawn up for the design and operation of a piolt plant for the mechanized production of green lacewing larvae, and the working out of means for insect storage, handling and field distribution.

The scientists hope to prove the system good enough for commercial agriculture use by applying from 50,000 to 100,000 larvae

### Traffic engineers attend workshop

Approximately 125 traffic engineers from five states will be on the campus Tuesday through Thursday for a transportation technology short course.

The three-day traffic engineering workshop is designed to assist the traffic engineer in his efforts to provide the safest, most economical and most functional street system possible, noted Milton L. Radke, head of the Community Services Department of the Texas Transportation Insti-

Co-sponsors are TTI and the Civil Engineering Department in cooperation with the Texas Section, Institute of Traffic Engi-

Speakers will be teachers and researchers who are involved in the development of the new concepts which will be presented, Radke said.

Emphasis during the program will be on the latest transportation concepts and technology as applied to specific traffic engineering problems, he added. All classes are scheduled in the Memorial Student Center.

Workshop subjects include urban transportation planning, effort to stop Hitler from gaining lighting, communications with drivers, operation of freeway and can be maintained. People treated of this excerpt can be applied to street networks, traffic design concepts and panel discussions.

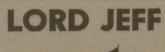
per acre, at bollworm egg-laying

large commercial farm. Dr. Richard L. Ridgway, head of the research laboratory, said "chemical insecticides can and will continue to be important tools in the battle against insects," but work should be done to perfect | alternate methods."

"The current cost for the development of a typical agricultural pesticide is about \$5 million, but we have so far been able to spent only a small fraction of that amount on the technique of releasing green lacewings," Dr. Ridgway said.

Biological pest control, he emphasized, is a more sophisticated technique than that of conventional pesticides and requires the and of modern technology.

"I am confident that with appropriate resources, we could time, in a demonstration on a develop this and many biological techniques that will give highly effective pest control and will compete favorably with conventional insecticides," Dr. Ridgway





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as morons, however, have no con-

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