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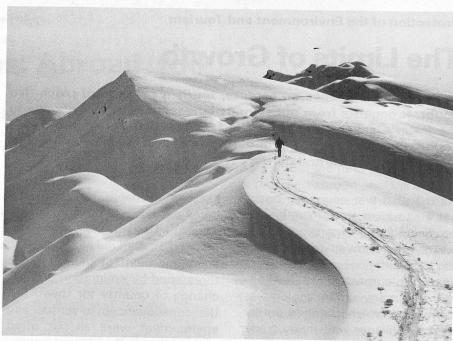
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Yet there are also positive developments: active holidays on a farm, the revival of hiking and other unmotorized leisure activities. These can certainly not be dismissed with the fashionable term «nostalgia»; the yearning for neglected values which one cannot consume, is both understandable and justified. In many places, touristic offers are now more related to the protection of the environment. More and more communes make their building zones smaller and consider ecological aspects in planning. And the realization that Switzerland is too small to satisfy the demand for second homes for half of Europe is beginning to gain ground.

## Renewed danger

The race between the hitherto unbroken quantitative growth and the preservation of the unaugmentable, rapidly decreasing natural values, which have been further diminished by the con-



Virgin mountain landscape: For how long?

(Photo: H. Weiss)

struction of power works, factories and roads, has not yet been won. The increasing damage to forests is an alarming signal. We are aware today that if, thanks to quick and effective action, we can escape once more,

we can afford further growth of tourism only if it is not at the expense of the environment. Only then can our country still be attractive for its own inhabitants and foreign visitors after the year 2000.

**Talking to Claude Nicollier** 

# **Profession: Astronaut**

Claude Nicollier will be the first Swiss citizen in space. The start will presumably take place in September next year. Nicollier's spacecraft will have the spacelab (inhabited space laboratory) on board, whose programme has been drawn up by ESA, the European Space Agency, and NASA

Nicollier is not very tall, slim, 41 and has deep-blue eyes. «Skyblue» eyes, an omen to become an astronaut? «I don't think so», he says with a smile. Claude Nicollier is pleasant, open and full of his job; he loves talking about his work. «It is phantastic to have the privilege to live at this moment», he declares. Astronaut is an unu-

sual profession – above all for a Swiss. It has been known officially for one year that Nicollier will fly on board a spacecraft for an EOM mission (for the observation of the environment in space).

## The first steps

Few only can be said to be astronauts, and it is not enough to have

the wish to be one. Nicollier has been preparing himself for this flight for many years. He studied physics in Lausanne and astrophysics in Geneva. Then he qualified as pilot with Swissair. He is also a military pilot and used to flying "Hunters" and "Tigers". This was a crucial fact in choosing him as an astronaut. "I have always been interested in space travel, but I never imagined that one day there would be astronauts other than Americans and Russians. As soon as I knew that

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Europe would also take part in this adventure, I applied, even before candidates were looked for.»

#### **Selection process**

Nicollier has undergone many tests and exams. The first one in 1977. Each of the eleven ESA members (Federal Germany, Belgium, Denmark, Spain, France, Ireland, Great Britain, Italy, the Netherlands, Sweden and Switzerland) chose five candidates. These were «sorted out» by several commissions of experts according to various criteria: naturally theoretical knowledge, but also psychological and physical condition. «The latter is extremely important in this job. About half of the astronauts get space sickness during the first three days of a flight, and this influences their performance considerably.»

Out of the initial 50 candidates, only three made the grade - Nicollier among them. Since then, he has had to undergo innumerable theoretical and practical courses in Europe and Houston. In Houston, he has worked closely with American astronauts since May 1980. The preparations last a long time and are complicated. «The astronauts don't spend their time solely in gyms, simulators and aircrafts as one might be inclined to think. Each astronaut has to do some specific jobs during the first few years besides his training.»

## The job

«The first year with NASA consists of a general training programme in the spacecraft. This includes piloting jet planes, surviving exercises, courses on general electronics, computer and space flight mechanics.

After the first year the astronauts have to deal with a specific problem. «In my case, it was check-



(Photo: NASA)

ing the soft-ware programs of a spacecraft with five computers on board. They have important tasks to fulfil, as for example the automatic steering of the spacecraft during the start and landing process as well as during the flight, in addition various complex functions like the selection of the rockets for the flight path control, the guiding of systems like supplying electric energy, the testing of air quality, the opening of the door to the cargo compartment, and the mission of the satellites. «My daily work during the preparatory phase for the actual mission training consists of checking all instructions which the board computer has stored. The slightest error in certain programmes can already result in a catastrophe.» Nicollier added: «These soft-ware tests are made in a cockpit which looks entirely like the interior of a spacecraft. Through the window one experiences scenes which the simulator computer creates: One sees the sky, the stars, the earth and the landing path. Tests for the ascent into space, manoeuvres around satellites in orbit are possible before the actual take-off. It looks terribly real.»

## **Experiments**

Apart from that, Nicollier will soon begin the training for the scientific board experiments during his mission: the universe, the earth, the atmosphere, the North and South lights (a glimmer in the sky. These polar lights are the result of a collision between charged particles and molecules and atoms of the atmosphere, which happens in the polar regions of our planet). What is the purpose of this excercise? «Our atmosphere is very thin and vulnerable. We have to get to know it better so as to protect it more effectively», is Nicollier's answer.

#### And what of the future?

In contrast to the American astronauts. Claude Nicollier has become a mission specialist. «I was engaged within the framework of a programme of co-operation between ESA and NASA, in order to take part in scientific work, and this as representative of the European states and also with a view to the interesting coming decade when a station will be completely constructed in space. It will be a question of bringing the parts, to join them up and then to use the station for reconnaissance and scientific research.» For this purpose it is likely that Nicollier will probably participate in several more space flights in future. «There is talk that I shall take part in a mission in 1988 when the task will be to get back the «Eureka» platform which will be put into orbit by a spacecraft. In addition, I hope to be able to play a part, at the beginning of the 'nineties, in the construction of a station in space... and if there were to be another space journey even to the Moon or to Mars, I should certainly apply.»

Interview:

Isabella Pedrazzini-Franzoni