# **General Information Sheet on Glacier Caves**

A glacier cave is a cave formed within the ice of a glacier. Glacier caves are often called ice caves, but this term is properly used to describe bedrock caves that contain year-round ice. Most glacier caves are started by water running through or under the glacier. This water often originates on the glacier's surface through melting, entering the ice at a Moulin and exiting at the glacier's snout at base level. Heat transfer from the water can cause sufficient melting to create an air-filled cavity, sometimes aided by solifluction. Air movement can then assist enlargement through melting in summer and sublimation in winter.

Some glacier caves are formed by geothermal heat from volcanic vents or hotsprings beneath the ice. Some glacier caves are relatively unstable due to melting and glacial motion, and are subject to localized or complete collapse, as well as elimination by glacial retreat. Glacier caves may be used by glaciologists to study the interior of glaciers. The study of glacier caves themselves is sometimes called glaciospeleology.

The study of glaciers ice caves in Nepal is relatively new. Shared below is a picture of the Khumbu Glacier Ice Cave,



Sources: http://en.wikipedia.org/wiki/Glacier\_cave; http://www.travelblog.org/Photos/714825.html

20 April 2009

## **Maurice DUCHENE**

Born on August 18, 1947 in France Retired from the French National Police

#### **Current Volunteer Activities:**

- President of HIMALPYRAMIS French Association « Himalaya, Alps, Pyrenean, Friendship ».
- Emeritus Technical Director of the **Friends Adventure Team** Tourism Agency in Nepal Technical Counselor in charge of developing canyoning and potholing in Nepal and Member of Honor of the **Nepal Canyoning Association**.
- Instructor French Caving Federation .

## **Previously:**

- Local Caving Rescue Team Counselor for the Midi-Pyrenees Regional Prefect from 1975 to 2006
- Expert in Underground Rescue for the Prefect of the South West Defence Zone
- Technical Prevention / Integration Counselor for young people who experience integration difficulties for the Midi-Pyrenees Regional Prefect

## **Sports Activities:**

- Explored around a thousand caves and abysses, including most important underground network in France : The Felix Network in Haute-Garonne, 973 meters deep and 112 kilometers long such as the th big ice caves of the Mont Perdu Massif, Marbore in Spain (16 expeditions), caving expeditions in Norway, Marocco, Switzerland and Nepal such as Under Ice in Nepal
- Practices caving (speleologie), ski, canyoning, mountaineering and upper mountain hiking, especially in Nepal where I spend 5 months a year (climbed passes up to 6500 meters high, explored caves, canyons et under ice caves)
- Wrote several articles and books related to caving (Martel Price De Joly 1983)
- Was General Secretary of the French Federation of Caving (Speleologie), acting President of the Rescue Commission
- Director of the Commission of big Caving Expeditions
- Founder and Vice President of the French Rescue Operations and directed more than 40 Rescuing operations with the Caving Rescue Society in Haute-Garonne that was founded by Professor LARENG (creator of the Emergency Medical Assistant Services)
- Secretary of the French Caving School, in charge of the Instructors Training
- Director of the first French Championships for Caving und Canyon down going
- Director for the Organization of and the Safety of the first Pyrenean Games for Adventure (sponsored by the French, Spanish and Andorran Olympic Committees)
- Technical Manager for the French Caving Federation in charge of Prevention and Safety for the Integration of young people facing insertion challenges through sports in a natural environment

#### Lecturer:

- Volunteered for Caving conferences in Nepal
- Gave professional conferences about drugs prevention and prevention against domestic violence

# Honors and Rewards:

- Chevalier of the National Legion of Merit: Silver and Gold Medals for Youth and Sports, Honor Medal of the National Police, Officer for the National Federation for Civil Protection
- Trophy for Civism and Mutual Aid of the Haute-Garonne of Legion of Merit, Bronze medal of the French Federation for Youth and Sports Medal Winners
- Bronze Medal of the National Federation for Civil Protection, Midi-Pyrenees region, such as in the cities of Saint-Gaudens and Carbonne.

#### **ICIMOD** Discussion Series

# **Presentation on Himalayan Glacier Caves**

by

#### Mr. Maurice Duchene from France

# Chairman of the Himalpyramis Association and Honorary Member and Technical Advisor of the Nepal Canyoning Association

#### PROGRAMME

Date:	28 April 2009
Time:	11:00 am – 12:30 am
Venue:	ICIMOD Conference Room
11:00 - 11:15	Refreshments, light snack
11:15 - 11:20	Opening by Mr. Daan Boom
	Programme Manager, Knowledge Management, ICIMOD
11:20 - 11:30	Introduction by Pradeep Mool, Remote Sensing Specialist, ICIMOD
11:30 - 12:00	Presentation by Mr. Maurice Duchene on 'Himalayan Glacier Caves'
12:00 - 12:30	Discussion, moderated by Pradeep Mool
12:30	Closing