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Welcoming Message from Professor L.S. Chan

Since I joined The University of Hong Kong 20 years ago, I have witnessed the transformations of the Earth Sciences Department, the developments of its academic programmes and the inception of the Society of Earth Sciences (SERS). There were times when the Department was challenged by budgetary cuts, inadequate staffing and acceptance of geology as a mainstream science as well as a profession. I was thoroughly impressed with the SERS inauguration ceremony early this year, when over 150 students attended the event in dignifying attire. My recent survey shows that graduates from HKU Earth Sciences now account for over 70% of the geological professionals in the government Geotechnical Engineering Office and the local mining-related firms, and over 50% in the geotechnical industry. Not only has the department grown stronger, the ES graduates are emerging as the backbone of the geological workforce in Hong Kong.

Over the years, I have participated in many events held by ES students, and I am always impressed

by the amount of effort and meaning each one inspirits. Events such as career talks, hiking trips, orientation camps and annual dinners surely shape the rounded development of the students. I am particularly proud of the bonding developed among the teachers, alumni and students of HKU Earth Sciences. The fellowship and fraternity fostered between the alumni and the current students are unrivaled by any programmes in HKU, much to the credits of the SERS.

This publication is the first yearbook SERS ever produced. I believe this yearbook will serve to commemorate meaningful moments shared by the ES students and teachers, encapsulate the achievements of the Department, and further foster the connection between the ES alumni and current students. It will also promote the general public's awareness of the Earth and further emphasize the importance of the smart management of our living environment.

L.S. Chan

Professor, Dept of Earth Sciences & Honorary President of SERS

Contributors

Contributors

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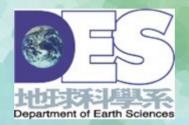
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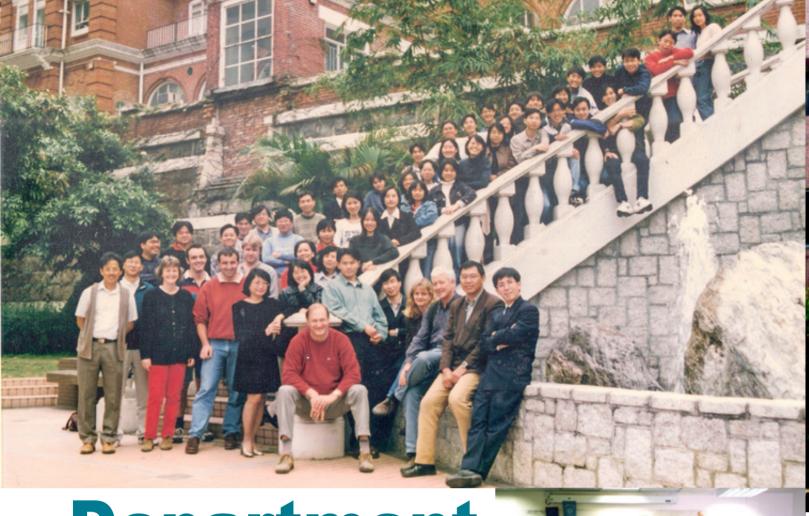
Special Thanks

Dr. Bach, Petra

Dr. Pittman, Michael

Dr. Tam, Tammy

Stephen Hui Geological Museum



Department History

Our department was established in 1995 to meet local demand for Earth science expertise. This is because as a densely populated city, Hong Kong's subtropical location, local geology and limited water and mineral resources present significant societal challenges. We are proud of these origins and continue to help improve our home through our research, teaching and graduates.

As an international hub located in East Asia, Hong Kong's global connectivity, strong work ethic and knowledge-based society provide competitive advantages that allowed us to quickly establish high standards of teaching and research. This of course also benefited from our access to the fascinating Asia region which provided prime study areas, teaching laboratories and collaborative opportunities.

The department has steadily grown into an ambitious mediumsized department and has earned an international reputation that is reflected in the nationalities, research interests and global collaborations we have.

Our history remains a strong asset but we look forward to writing the best chapters of this history as we meet future challenges and strive for further excellence.





Earth Sciences, Hong Kong Students

The Department of Earth Sciences, The University of Hong Kong

offers a bachelor of science honors degree for the following (as of August 2014 from Faculty of Sciences, HKU):

Major in Earth System Science (4- year curriculum)

Major in Geology (4- year curriculum)

Minor in Earth Sciences (4- year curriculum)

Major in Earth Sciences (3- year curriculum)

Minor in Earth Sciences (3- year curriculum)

Minor in Global Climate Change (3- year curriculum)

Some courses are qualified to be accredited by the Geological Society of London, a UK body which grants professional qualification for Chartered Geologist. DES is the first Earth Sciences department in Hong Kong and is ranked #34 according to the QS World University Ranking of Earth & Marine departments (as of August 2014).

What is Earth Sciences?

Earth Sciences aim to understand Earth as one big system by observing clues from its past and present as well as predicting its future behavior. We attempt to understand the interactions between its different components- geosphere, atmosphere, biosphere and hydrosphere works.

As humans is an integrated part of the system, recognizing the whole picture will provide the knowledge to find solutions for dealing current issues such as sustainable development, urbanization, global warming, water shortage, disaster mitigation, etc.

Apart from learning the Earth holistically, we also learn technical skills such as applied geochemistry, geophysics, coastal management, engineering geology and hydrogeology through various different methods within and outside the university to equip us for further research or career.

For details of the syllabus, please refer to: http://www.earthsciences.hku.hk/current-students/undergraduate-students/plan-of-study (as of August 2014)

For details of admission requirements, please refer: http://www.scifac.hku.hk/ug/prospective-student/application (as of August 2014)

What makes our academic studies so unique? **Experiential Learning**

Article by Matthew Chiu

Field Course

Apart from learning from the textbook or classrooms, DES students often go on field trips to have an all rounded and holistic learning experience. Reflections from many students and alumni firmly believe that they learn best by using all our five senses to understand the complexities of the Earth.

In addition, they think that the sense of friendship is usually bonded through working hard and playing hard in field works and off-times.

DES students have visited some geologically interesting places locally such as Lai Chi Chong, Port Island, Tung Ping Chau and East Dam and internationally such as China, Australia, Cyprus, and the US.







The Society of Earth Sciences,

Department of Earth Sciences, The University of Hong Kong



is a student organization established in 2007 under the Department of Earth Sciences in the University of Hong Kong.

The Society aims to promote Earth Sciences to all university students in HKU as well as to the general public.

Our society has assisted the department over the years in providing career opportunities, field trips, orientations and social gatherings as a supplement to members who has an interest in Earth Sciences or Geology.

Through our activities and events, our members will have a deeper awareness and understanding towards the history of the Earth and its structure, materials and processes. Anyone who is a member of HKU are eligible to become our member.



The 1st Cabinet (2007-2008)

Markus Chan Chloe Chan Kam Sau Jeremy Luk Sai Kit Olivia Lam Wing Yuen Ken Lam Kin Fung Nancy Leung Lai Shan Jason Lam Ting Hin Kimberly Leung Ho Yi President
Internal Vice-President
External Vice-President
General Secretary
Financial Secretary
Academic Secretary
Publication and Publicity Secretary

Social Secretary

The 2nd Cabinet (2009-2010)

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Tse Kwan Ming, Deuts Wong Wai Chung, June

Yan Chin To, Jonathan Yiu Hei Man, Janice Internal Vice-President
Acting General Secretary
External Vice-President
Financial Secretary
Academic Secretary

Acting Social Secretary Publication and Publicity Secretary

The 3rd Cabinet (2010-2011)

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Tracy Ma Chui Yi Adam Yung For Tat Wong Kam Hung President Internal Vice-President External Vice-President General Secretary Financial Secretary

Academic Secretary Publication and Publicity Secretary Social Secretary

The 4th Cabinet (2012-2013)

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Chu Chin Yip, Andrew

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The 5th Cabinet "Aventurine" (2013-2014)

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Publication and Publicity Secretary
Social Secretary
Social Secretary

The 6th Cabinet (2014-2015)

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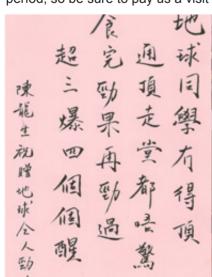


February of every year marks the change in presidency in our society. The Inauguration Ceremony officially recognizes the succession of the new cabinet witnessed by our members, the Department of Earth Sciences, other societies, companies and third parties. We are honored to see the continuous support by all our partners and friends over the years and also look forward to co-operating with you in the near future.

Social Gathering

Apart from academics, we host a variety of social gatherings to bond with each other. Our "Superpass" Dinner is a traditional way of blessing students to obtain high scores. Professors will come and give best wishes by giving red packets and everyone will chop the symbolic roasted pig and write faai chun.

Not only that, each member will receive two complimentary welfare packs per year as a way to give thanks for their continuous support to the society. These will be collected on welfare weeks where new society products will also be sold. Some geological products can also be ordered during this period, so be sure to pay us a visit during our welfare week!











Orientation Series

Orientation Camps or O-camps are organized for freshmen to be integrated into the university life. Since its establishment, the society has organized the "Small O-camp" every year, a camp which designed for people whom has interest in the majors or minors offered by the department.

Our camp consists of HKU traditions such as HKU Orientation, HK Orientation, Dances, Cheers, Songs, Mass Games and Ghost Story Telling. In addition, our camp will include our unique elements such as hiking, alumni sharing, academic advising and site visits.

The aim of our O camp is mainly to have fun and to meet your classmates, but also to have a brief perspective on the challenges and elements you will face during your undergraduate life.



Service to Public

Our society does not only serve our own members, but we will also promote Earth Sciences to the general public through many different channels. Educating the citizens will raise their awareness on the geological beauty Hong Kong, which will also provoke their sense of conservation.

We will continue to help with the Mineral Fair, an event organized by the Mineralogy Society aimed to showcase the beauty of minerals and fossils, to allow the general public to realize the link between their lives and Earth Sciences.

Also, we will have regular tours in the museum to promote Earth Sciences to fellow students of HKU and the general public.



Career Related Events

Career talk is one of the most important events in our society with the highest participation rate. Every semester, we have companies from related fields in Earth Sciences recruit members for possible internship opportunities or a full time job in the field of their interest.

In addition, we have site visits, firm visits as well as mock interview sessions for members to get a taste of their future job as well as a chance to sharpen on their various business skills.

In the near future, we will consider mentorship program for members to further understand their career opportunities as well as connecting with alumnus.

This compliments with the undergraduate internship work which they are required to experience sometime during their degree.









Annual Dinner

The Annual Dinner aims to provide an opportunity for our professors, alumni, and undergraduates to get together. On this occasion, all parties can share their bits and pieces of life at HKU Earth Sciences. Staff and alumni can as well inspire the students in studies and career issues.

Our society had hosted an annual dinner in 2012 and 2013, and the department has plans to jointly host another one in 2015 to commemorate the 20th anniversary of the establishment of this department. We urge everyone, especially alumni to come celebrate the development and transformation of this department.



Members' Voices



Christopher So Class of 2015



Andy Lai Class of 2015

Throughout the year, I can see the society is making every endeavor to provide its members with a wide range of welfare and activities. The career talks organized by the society really let me know much more about the details about different career paths. The visit to the saltwater reservoirs inside a rock cavern in HKU is another worth noting event held by the society. Such kind of construction is rare in Hong Kong and is worth studying in terms of its environmental value. Even though the construction is within HKU, I can admit that it's not easy to take a look at that. Thanks to the society's work, students in our major get the chance to explore the every bit inside the cavern with the guide of an experienced planner and engineer of the project. I hope the society will continue to offer us opportunities to gain more memorable experiences.

As an Earth Science student, the Society of Earth Science has been an indispensable part of my college life. This year, the society has held various activities as always. While the science-related activities have attracted lots of our major students, the non-science based activities, like rock climbing, have provided the participants with precious experiences. Personally, I appreciate the most the tour to the reservoir behind the centennial campus. Seldom do we have this kind of chance to closely observe and walk inside an underground reservoir like that. Moreover, the dinosaur tour with Dr. Pittman was eye-opening and I kind of had a lesson of Palaeontology, which is not taught in HKU, in the tour. Lastly, I can foresee that the society will probably be better in the coming years as its activities will be further improved regarding their attractiveness and diversity. It will predictably cost lots of hard work but I do believe that it will be definitely worth it.

During my undergraduate study, the Society of Earth Sciences had not been founded yet. I still remember how my classmates were preparing to set up our own 'society of rocks'. At first, we wanted to connect, share, and exchange ideas among like-minded people in our circle. It could also enhance professors-staff-students-alumni relationship as well as provide a platform to pass our 'culture' on to future students. Years after, during my postgraduate study, I had the honour to witness the establishment of the society. I remember the time I participates in the first event (orientation camp) organized by the first cabinet. The committee members worked so hard to leave an impression on the freshmen. Everyone was trying to create an 'Earth' tradition' to pass on together. I continued to join the activities organized by the society after graduation. I am delighted to get to know new students year after year.

In recent years, the events are getting even more diversified. I guess students nowadays are becoming more creative. They organized great events such as annual dinner, mineral festival, seminars, career talks, expeditions etc. I can see that the committee members are making significant progress toward maintaining a successful society. I am glad to be a part of it either as a participant or a guest. The society has given me an opportunity to share my view as a geologist during the career talk, as well as to be a geo-guide for field trips. I hope that through volunteering for the society, I can enlighten young people who are passionate about geology and can raise the interest among the general public

As an Earth Scientist, our mission is to maintain the balance among nature and human kind. The society serves as a 'circle of rocks' to connect people with such aspiration.

I wish all the best to the Society of Earth Sciences and all the fellow members.

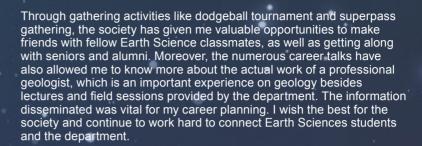


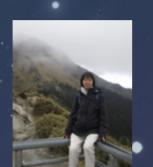
Trudy H.J. Kwong (Class of 2008)

Geologist of BMI Technical
Consulting (Resources) Limited



Chison Cheuna Class of 2016





Joyce Yiu Class of 2016

I have been a member of the society since Year 1 and I participated in a number of field trips and site visits. Memorable field trips include the visits to Needle Hill wolframite mine and Ma On Shan iron mine. Following an experienced geologist helps me learn things that I cannot learn inside classrooms. The trips also helped me to broaden my knowledge.

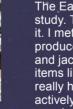
Apart from outdoor activities, the indoor activities are inspiring as well. The career talks and mock interviews are useful. The career talks deepen my understanding of the future development of a geologist. Then we know if we have chosen the right path and know what to expect in the future.

I believe that the society does a good job in maintaining relationships with students and alumni. The experiences and knowledge of our seniors truly benefit us undergraduates.



Martin Li Class of 2012

Although not many students are studying earth sciences, but honestly, I think these students are enjoying one of the best society in the university. I like the activities SERS had organized very much, especially those about hiking and excursion to some geological hot spots in hk. Some places in hk are very beautiful but very difficult to access but I think the society provides us a chance to enjoy the scenery and also learn the geology with a closer look. I remembered once that the society has organized a trip to ninepin islands which can only be accessed by boats. I really think the society is always giving us a fantastic experience. These activities also gave us chances to make friends with more classmates or geology lovers. I believe the society is making more and more similar, and attract more and more to get a taste of the funny geologist!



Nelson Lau Class of 2011

The Earth Sciences Society was really helpful during my undergrad study. The activities like field trips were wonderful and I learnt a lot from it. I met many new friends and we had a lot of fun. The society also produced many useful items like the beautifully designed society paper and jackets. Most importantly, the society helped us order some useful items like water-proof field books, hand-lens and compass. These really helped me a lot even after graduation. I hope the society can also actively do more to promote Geology to others, not only Earth Sciences members. The general public only know a little about Geology, which I hope more people can know more about it.



Tang Tsz Yeung Class of 2017

In fact, I am not an active member in the society because I always have some other business in the other cabinet. Nevertheless, this society gives me a home-like feeling. Being an earth science student, I have passion in this aspect. And I am also keen to cooperate with other fellows sharing the same interest. In the coming year, I hope the society can hold more functions acting as a bridge connecting the seniors and juniors so that further communication and network developing can be developed. I am looking forward to hiking with professor xddd!



Become our Executive Member!

Why be an executive member?

Being an executive member will show your proactive spirit to pursue more in academics. You will also create opportunities for yourself as well as building friendship and connections with the local and regional community along the way. You will be able to host various different events for your fellow classmates and also attempt to initiate functions which might be interesting to you. Through this process, you will learn academically while simultaneously contributing back to HKU and the community. More importantly, you will build valuable friendships which will be very important in the future.

Do you want to become an executive member?

Every September, the society will need a group of determined, passionate and proactive undergraduates to become the helmsmen of our society. They will be selected to become the executive members of the next cabinet after undergoing a number of challenges. All HKU undergraduates and postgraduates are allowed to become an executive member and having a major or minor offered by the department is not mandatory.

The past executive committee will guide and prepare your duty according to your position until the beginning of the next semester when you are fully ready to be on your own.

What if I want to help but don't have enough time?

Those who are only free at times to help can become a subcommittee. Some activities such as orientation camps or inauguration ceremony may require more helpers in order to function and run smoothly. We warmly welcome volunteers who would love to pay a contribution to our society.

Don't miss the chance! Be sure to keep yourself updated for upcoming executive tea gatherings!



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Stephen Hui Geological Museum –

A place for everybody!

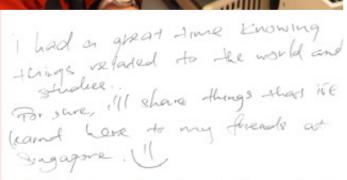


This year is the 5th anniversary of the Stephen Hui Geological Museum which opened to public as the first and only geological museum in Hong Kong on January 16, 2009. It is located on the campus of the University of Hong Kong as part of the Department of Earth Sciences of the Faculty of Sciences. The mission of the Museum is to provide an attractive object-based learning facility for understanding the nature and evolution of our planet Earth to visitors of all ages through showcasing a world-class collection of about 350 fossils from China, 950 mineral and 300 rock specimens.

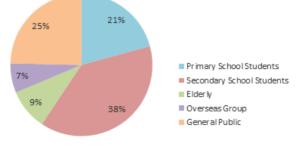
During the first 5 years the museum established itself as a well recognized resource for extra-classroom educational activities in the Earth Sciences not only for university students but also for Primary and Secondary Schools, Elderly Centers, NGO's, Overseas Groups and the general public.

Visiting the Stephen Hui Geological Museum you will be introduced to the fascinating world of rocks, minerals and their economic uses. You can discover how rocks and fossils provide clues to the Earth's past to understand the origin and evolution of our planet. You may wish to learn how the continents move, where ocean basins come from, and how mountain ranges form.

The Museum organizes outreach events and activities such as the first Mineral Festival in Hong Kong, temporary exhibitions and frequent guided museum tours including the popular "Magic Planet" demonstration in our 30-seat theater. Loan sets including rocks, minerals and fossils are available for educational support and can be arranged to suit specific requirements.







Caption: Profile of participants in the SHGM guided museum tours.



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Closed on Sat, Sun, University and Public Holidays

Address:

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Fax:

(852) 2517 6912

Admission is free.

For further information and bookings contact us via:

Email:

shmuseum@hku.hk

Website:

http://www.hku.hk/shmuseum

Facebook:

http://www.facebook.com/Stephen.Hui.Geological.Museum





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With the minimum distance of 970 kilometres from the South America. Antarctica is the most remote and last unexplored piece of land on our Earth. Antarctica covers an area of 14,250,000 square kilometres; even larger than China. 99% of the land mass is covered by ice and only 1% of rocks is exposed at the surface. This continent was not landed by any human being until 1820. It does not belong to any countries, nor does it have any permanent residents. It is the last great wilderness on the Earth.

Scientists believe that underneath the continental ice sheets, there exists a huge amount of unexplored natural sources. In the 1980s, many countries started to have the proposals of natural resources exploitation on the Antarctica continent. In order to protect the environment of Antarctica and as a supplemental of the "Antarctic Treaty", the "Protocol on Environmental Protection to the Antarctic Treaty", also known as the "Madrid Protocol", was signed on 4th October, 1991 and was enforced on 14th January, 1998. It stated that any activity relating to mineral resources, other than scientific research. should be prohibited. The Protocol will be open for review after 50 years in 2048.

Knowledge Box - "Antarctic Treaty"

For the continuation and development of the scientific cooperation in Antarctica as applied during the International Geophysical Year (IGY) in 1957, Argentina, Australia, Belgium, Chile, the French Republic, Japan, New Zealand, Norway, the Union of South Africa, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America signed the "Antarctic Treaty" on 1st December, 1959 in Washington D.C. The Treaty entered into force on 23rd June, 1961. The Treaty states that the Antarctica shall be used for peaceful purposes only; any measures of a military nature shall be prohibited.

Currently, 50 countries have signed the Treaty. Of the 50, 28 countries, including all 12 original signatories to the Treaty and 16 countries that have demonstrated their interest in Antarctica by carrying out substantial scientific activity, have the right to vote in the annual Antarctic Treaty Consultative Meetings (ATCM), while the remaining 22 countries can only attend the meeting without voting rights.

> "The Protocol will be open for review after 50 years in 2048."





Antarctica is our last reserve of natural resources.

Nowadays, the Arctic, unlike Antarctica, is being exploited for its rich reserves of oil and gas. It is estimated that there are 50 billion to 100 billion barrels of oil inside the Arctic Circle, which is equals to three years of resources used under our current oil consumption rate. However, the oil drilling activities in Arctic exposed the region under the risk of oil spilling which would have catastrophic impact on ecosystem of the Arctic.

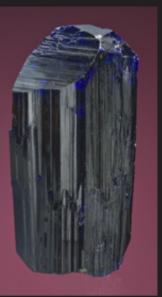
In order to avoid putting Antarctica under the same threats, it is now the time to place this issue into the spotlight. Antarctica is our last reserve of natural resources. When existing resources are closed to exhaustion, massive exploitation projects are likely to occur in Antarctica in 2048 if the "Madrid Protocol" is open for review. We believe that to preserve Antarctica, practicing sustainable and effective use of resources as well as exploring alternatives such as renewable energy through making changes in business development and policy decision would be a way to ensure this last wilderness on Earth will never be exploited.



By Earth Resources Centre Limited



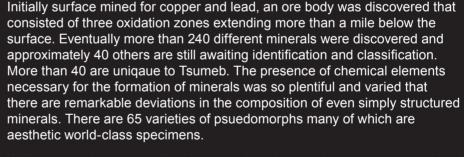




Minerals from Tsumeb Mine



In the northeast corner of Namibia, formerly South West Africa, there existed an ore deposit that would become on of the World's most productive mines. Known only to the Bushmen until the mid 1800's it was named the Tsumeb Mine after the village nearby, which was founded by the Germans. The region become one of the World's greatest mineral localities.





While many mines or localities have produced mineral specimens considered to be the "best of the species" ever found, most are known for one or two with this distinction. In contrast, Tsumeb, with almost 280 different species, has more than 100 minerals considered "best of the species". Many of these exhibit outstanding variations of color, form and crystal habit unique to the locality. Tsumeb species set the standard by which others are judged.

The mine was closed and flooded in 1996 and collectors were left with limited supply of beautiful specimens. Visually all of the sources in Namibia are now gone and only specimens from existing collections are occasionally available.

Article: Sam Yung



Anglesite on Galena from Touissit Mine, Ouijda, Morocco Photo : Jeff Scovil

Sam Yung Collector

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JOURNAL OF BOREDOM(MOLIU)-ILLOGICAL SCIENCE RESEARCH

"Lung Effect" and its influence on Earth Sciences graduates

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Abstract

A disastrous and contagious effect, known as "Lung Effect" is well documented and discussed in this paper. The induce of catastrophic natural event originated from Prof. Lung-Sang Chan has been spread out to his postgraduate students, as well as research fellows. The infected victims are becoming disasters-inducers, and the effect is life-long. There is no known scientific or medical method to stop the effect, but can only avoid it. This paper aimed at providing the truth to all sufferers, and hoped to warn anyone planning to work with Prof. Chan.

Keywords: "Lung Effect"; Prof. L.S. Chan; disasters; climate change; Hong Kong

1. Introduction

The "Lung Effect" is a contagious disease named after Prof. Lung-Sang Chan of Department of Earth Sciences, the University of Hong Kong. Prof. Chan is a catastrophic-event-inducer of all natural disasters. He is very well known as being the "Lord of the Rain" in Hong Kong as most heavy rainstorms were induced by his outdoor activities (Tam & Chan 2000, Leung et al. 2001). Almost every time he works in the field, it rains. Knowing the outdoor schedule of Prof. Chan is more accurate than weather forecast from the observatory. In recent times, it is clear to see that the "Lung Effect" has been spreading to some of his graduates catastrophically. Tornados, earthquakes, landslides, hill fire, snowstorms, and heavy rains were initiated all over the world.

2. Evidence of "Lung Effect"

It is evident that catastrophes or disasters were following Prof. Chan since the establishment of the Department of Earth Sciences in 1995 and it was getting worse after year 2000 (Tam & Chan 2000). The events were totally involuntary unfortunately. Natural disasters always happened during the overseas field camp when Prof. Chan was leading the trip. For example, hill fire in Alice Springs, central Australia, and severe rainfall in Montana, USA. Although no official records could be retrieved, according some of the past students, Prof. Chan is undeniably the "Lord of the Rain" in Hong Kong (Leung et al. 2001). The rain clouds are after him wherever he goes.

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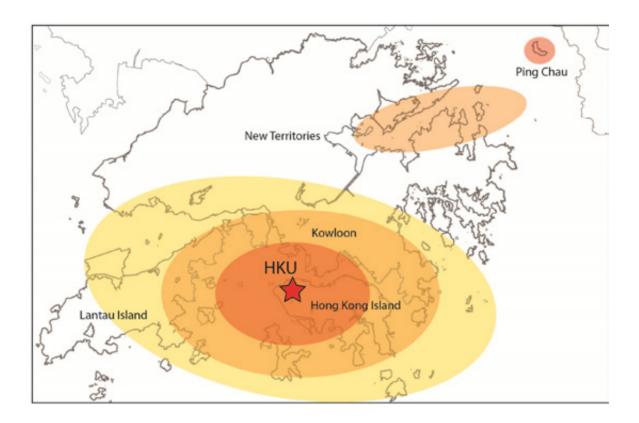


Figure 1. Zones affected by "Lung Effect" in Hong Kong (Credit: Denise Tang)

2.1 Ping Chau, 2011

A very strong evidence was dated back to December 2011, when Prof. Chan was leading a trip for MSc students to Ping Chau. On that day, the writer was also guiding another group to the same location. The rain season of Hong Kong is generally from June to August. It is unusual to have heavy rain during the winter time. However, it was totally unexpected that rain developed and it was pouring like showers in Ping Chau (Fig. 1). When Prof. Chan was leaving at an earlier ferry, the rain clouds followed him and the weather became absolutely fine in Ping Chau. Standing from the island and looking at the sea, it is amazing to see that the rain clouds were after the ferry. A number of people from our group witnessed the event, and we started to believe in "Lord of the Rain".

2.2 Taiwan 2009

The first well-documented "Lung Effect" was described by the writer in her diary during the Taiwan field trip in May 2009. In the 6-days field trip, it rained heavily for the entire trip. When Prof. Chan started talking about geology in the field, thunderstorm occurred and interrupted the lecture. Rainfall was following him and a lot of places were flooded. Students cannot access to the geological spots as scheduled. Everybody was soaked in water after the field work. Strangely after 6 days, the weather finally changed back to normal when we were about to depart back to Hong Kong. The weather of Taiwan was never been good since we arrived. But when we left, everything was changing back normal again. The Taiwan trip provided inspiration for the writer to collect evidence of "Lung Effect" ever since.

2.3 Taiwan 2010

The year followed 2009, the writer had experienced the "Lung Effect" and recorded in details again. It was in June 2010, Dr. Jason Ali was leading a trip with the writer for the first year students of Department of Earth Sciences. When we arrived at Kaohsiung airport, it was again pouring like showers in Taiwan (Fig. 2). The writer was surprised as Prof. Chan was not with them. However, later we got a text message from Prof. Chan, saying he was in Kenting, Taiwan for a personal trip. It was totally disappointed as we thought we were finally got rid of him. Miracle happened on the next day, as we woke up, we found sunshine. The writer called Prof. Chan and he confirmed that he was leaving. Everything was never been that clear. No Prof. Chan, no rain.



Figure 2. Field work during heavy rain in the first day of Taiwan trip (Photo by Agnes Yeung)

3. Evidence of contagiousness of "Lung Effect"

Unluckily, the "Lung Effect" could be contagious especially on Prof. Chan's postgraduate students or research colleagues. A very famous victim of "Lung Effect" is Mr. Karfai Leung, who is an early postgraduate student of Prof. Chan. During an interview session with Mr. Leung, he was mad about what had happened on him. He is almost experiencing the same effect as Prof. Chan. When he works in field, it rains. Luckily he is just inherited half of the "Lung Effect", as he is just experiencing rainfall.

Similar effect has been experienced by Dr. Kenny Wong, a previous post-doctoral fellow of Prof. Chan. Dr. Wong worked with Prof. Chan for about 1 year. Unfortunately, he realized himself got infected during his field study in March 2010. Rainfall and flooding occurred in west Guangdong Province, China. However, more catastrophic event was happened during recent years. It was not limited to rainfall merely.

3.1 Alabama, USA April 2011

The largest tornado outbreak ever recorded in USA, was experienced by Dr. Jay Tung, a PhD graduate of Prof. Chan. Dr. Tung arrived Tuscaloosa, Alabama, USA at 25 April 2011. The tornado hit the region after 5 hours when he reached the place. Dr. Tung witnessed the first tornado outbreak in his entire life. Most houses were destroyed. A lot of facilities were severely damaged (Fig. 3). Dr. Tung finally realized this event was induced by "Lung Effect" and he became a victim of it (Tung 2012).



Figure 3. Tornado damage in Alabama (Photo by Dr. Jay Tung)

3.2 Henan, China July 2012

The writer experienced a disastrous flooding during her field work in Xixia County, Henan Provence, China in July 2012. Even though she was graduated, the "Lung Effect" hasn't weakened, but unfortunately got stronger. Xixia County is a relatively high altitude region in

Henan. Rainfall in summer is not intense comparing to south China region. During the field study, the area where the writer stayed was suffered from severe rainfall. Rivers became waterfalls. Most regions near rivers were flooded. The rain and the flood damaged a lot of facilities and farms. The County had blackouts back and forth. Local villagers said they had never experienced such a strong rain before.



Figure 4. Flooding in Henan, China (Photo by Kencer Ho)

3.3 United Kingdom March 2013

The "Lung Effect" acting on the writer seems never end. During her travel to Scotland in March 2013, she witnessed the coldest Easter in United Kingdom. Severe snowfall and storms were built up. Most places in United Kingdom were below 0 degree Celsius. Some of the places in Scotland had blackout. When the writer was in Scotlish Highlands, she experienced the worse weather in her entire life. She could not even stand for 60 seconds in open air. Extreme cold and dry weather were driving everyone crazy.

3.4 South Dakota, USA October 2013

The very recent ongoing disaster was the October blizzard in South Dakota, USA. Dr. Jay Tung was experiencing an abnormal snowfall in Rapid City, where he newly moved in. According to Dr. Tung, 33 inches of snow was accumulated in 1 day. Everything was covering in white. He was stuck at his home for long because of the

snow. Cars cannot function properly. Everyone is forced to learn skiing for transportation.

4. Discussion

4.1 Farer the distance, more intense the effect

It is evident that "Lung Effect" could be amplified when Prof. Chan or affected victims were away from Hong Kong due to less frequent travel. Nature has its balance. When Prof. Chan and his postgraduate students were concentrated in a place, less intensive is the disaster. Therefore, in south China region, Taiwan and Hong Kong, for most of the time rainfall is experienced. However, farer the place, less frequent of travel, the "Lung Effect" will be more disastrous, varied, and happened in a shorter time span. This phenomenon can be explained in Dr. Tung's experiences in USA, where the events are the most catastrophic. The writer's experience in United Kingdom and Henan, China is less disastrous due to shorter distance to Hong Kong.

4.2 Immunity of "Lung Effect"

It is likely that postgraduate students of Prof. Chan are prone to be infected. For example, Dr. Jay Tung, he had spent 3 years with Prof. Chan as his PhD student, he had experienced the worse (Tung 2012). Dr. Tammy Tam, a recent post-doctoral fellow of Prof. Chan, is becoming a victim of "Lung Effect". However, not all postgraduate students of Prof. Chan were affected as non-Hong Kong postgraduates have different genes (Tsang et al. 2009). They already have immunity luckily.

There is one special case has to be mentioned, is Miss. Debbie Tsang, who is an MPhil graduate of Prof. Chan. Miss. Tsang spent 2 years with Prof. Chan working on plutonic rocks in south China, but she never got infected. Miss. Tsang is exactly the opposite of Prof. Chan, as wherever she goes sun will shine. On 22 December 2013, South Carolina experienced a deadly mix of

weather pattern. The severe weather caused 7,060 domestic and international flight delay and 686 flight cancellation. When Miss. Tsang arrived Atlanta, Georgia on 23 December, no rain and no extreme weathers anymore in South Carolina. Miss. Tsang's immunity revealed a very powerful anti-"Lung Effect". As everything has its pair of opposites, Miss. Tsang is believed to be another side of extreme from Prof. Chan. She is the very lucky one that never experience worse weather during field work except intense sunshine.

Although Miss. Tsang is an opposite of Prof. Chan, she could not reduce his catastrophic power when both of them were located in the same place. In July 2010, Miss. Tsang was working on a stromatolite research with Prof. Chan in the west coast of Australia. A strong storm reached the place when they were heading to Hamelin Pool. When the Western Australia issued a severe weather warning, the two of them were driving in the centre of the rainstorm (Fig. 5). It seems that the "Lung Effect" does not have any resistance from any power.

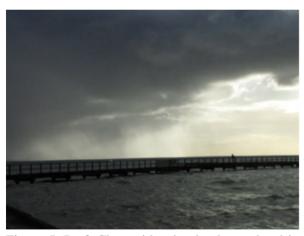


Figure 5. Prof. Chan with rain clouds overhead in Western Australia (Photo by Debbie Tsang)

The reason of Miss. Tsang's immunity of "Lung Effect" could not be explained. However, the writer knows Miss. Tsang for about 5 years. She is in fact abnormal in every part, i.e. way of thinking, character, and personality etc. Therefore, the writer is questionable of her being *Homo sapiens* or not.

4.3 Abnormal phenomenon

It is undoubtedly that Prof. Chan and his students will induce disasters when working outdoors. However, there is some abnormal pattern observed during the field studies. When two inducers (or even numbers) were located exactly in the same region, two negatives make a positive. For example, when Prof. Chan is going for field work with Mr. Karfai Leung, sun will shine. But when three inducers (or odd numbers) were together in one place, the catastrophe induced will amplify three times stronger. The effect is evidence that for every typhoon signal no. 3 hosted, there must be at least three of "Lung Effect" inducers out for fieldwork.

4.4 Catalyst of "Lung Effect"

There is a very special case to be mentioned, is Mr. Jacky Chan, who completed a final year project with Prof. Chan in 2004. The very first time Mr. Chan experienced the "Lung Effect" was during his first year field trip to Beijing in June 2002. The temperature was about 30 degree Celsius at that time. But when Prof. Chan arrived on the second day, the temperature was plummeted to 5 degree Celsius with freezing rain. Similar events happened when two of them were in the field. However, it was the writer who realizes Mr. Chan is acting as a catalyst to "Lung Effect".

The writer worked with Mr. Chan since 2011 and she discovered that Mr. Chan is not a catastrophic-inducer at all. But when he is having field work with Prof. Chan, the disaster induced is amplified. According to both of them, during October 2003, they went to collect rock samples in Tuen Mun for geological research. During the field work, it was pouring for 4 hours coinciding with the time of their outdoor work. The rain during the 4 hours was the only rainy time for the entire 6 weeks before and after. The writer checked the historical rainfall record from the Hong Kong Observatory. She believes that the date of field

work should be 11 October 2003, as it is the only day of the month that rained intensely. The reason for Mr. Chan as being a catalyst to "Lung Effect" is still remain unknown.

4.5 Mitigation of "Lung Effect"

Unfortunately, "Lung Effect" cannot be mitigated scientifically or medically (Tsang et al. 2009). It is likely that the contagiousness is lifelong. To avoid the rain or disasters going-to-happened, the only way is to know Prof. Chan's outdoor schedule before any planning. One possible way to weaken the "Lung Effect" is to move away from Prof. Chan forever. A good example is Dr. Kenny Wong, he moved to Oslo, Norway for his post-doctoral research. He stayed away from Prof. Chan for almost 3 years. Luckily, according to his recent update, he is experiencing less disastrous event. However, it is still questionable that the "Lung Effect" on him has detached or not.

5. Conclusions

The "Lung Effect" experienced on Prof. Chan is very disastrous. The contagiousness to his postgraduate students can affect a lot people around the world. Rainfall will be experienced when Prof. Chan or his infected students work in field in Hong Kong, Taiwan, and south China region. Severe event will happen when traveling far. There is no known solution for the effect yet. The writer proposes to transfer Prof. Chan to arid zones such as Africa or inland desert regions so as to bring rainwater for people suffering from drought. It is the only constructive way for the "Lung Effect" inducers to bring peace to the world.

6. Further study

 The writer will further collaborate with Dr. Jay Tung, to monitor and document his abnormal activities. As Dr. Tung moved to USA for post-doctoral research, if staying away from Prof. Chan can diminish the "Lung Effect",

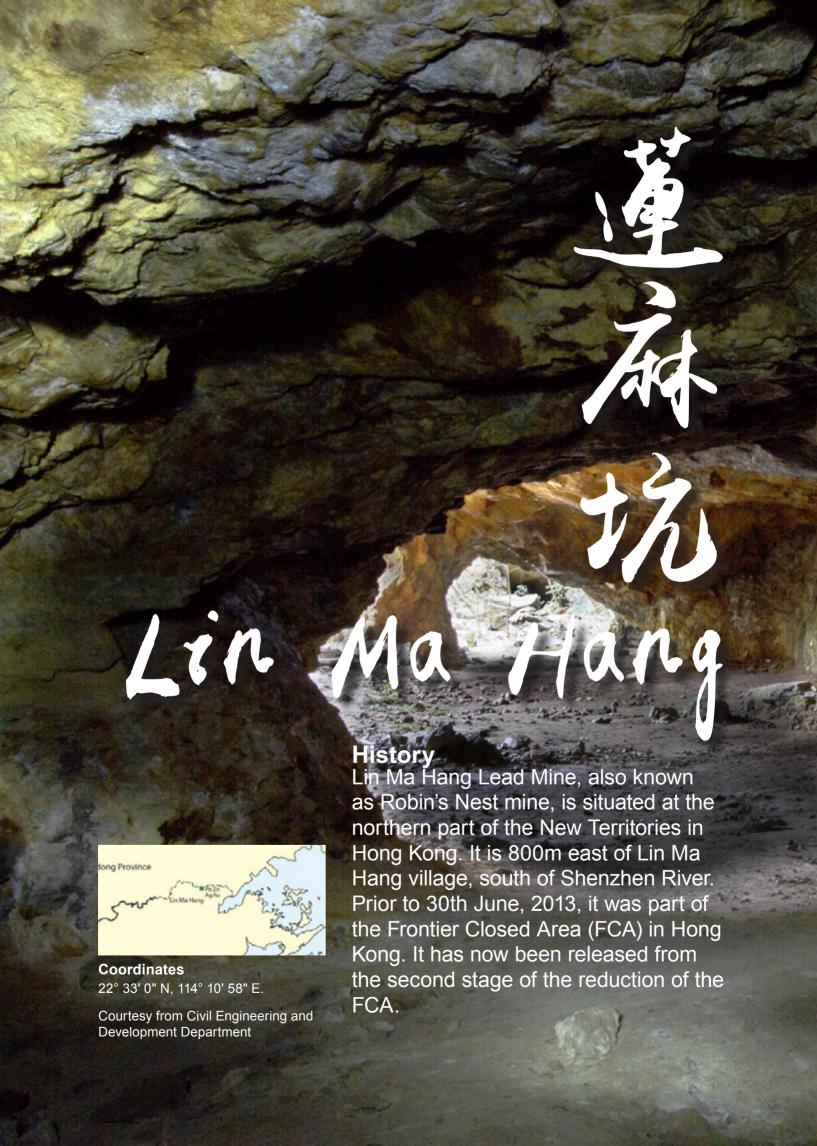
- theoretically he will experience less disastrous
- 2. The writer will carry out anthropological research on Miss. Debbie Tsang, to see if she is really humankind. The abnormality of Miss. Tsang is scientifically unexplainable.

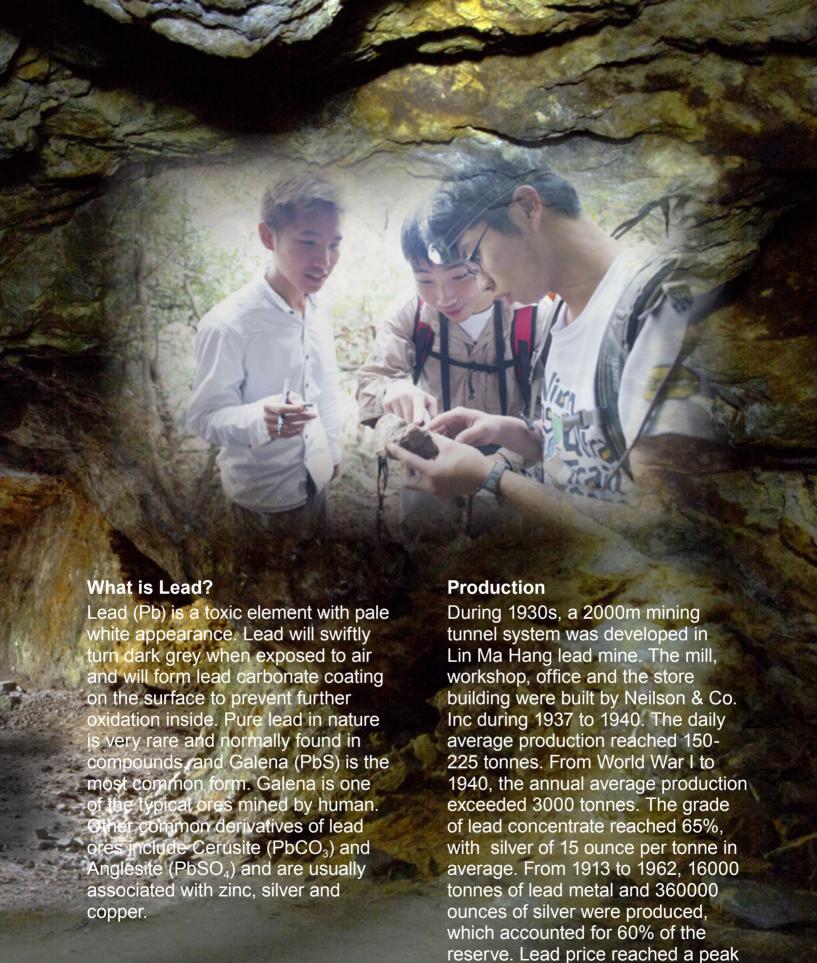
Acknowledgements

I acknowledge numerous victims from the Department of Earth Sciences, the University of Hong Kong, who have been suffered by the "Lung Effect" and who are so generous as to share their sobbing experience. I thank Dr. Tung, Prof. Chan and an anonymous reviewer for constructive reviews. Financial support from Institute of Moliu *Homo Sapiens* is gratefully acknowledged.

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high up to \$1940 per tonne during that time. The lowest price was \$280

per tonne.



Underground mining (Photos)

There are five mining levels at Lin Ma Hang lead mine from a report in 1953:

Level 1: Lowest in elevation, located at the border road in Lin Ma Hang

Level 2: Richest sector of ore reserve

Level 3: The adit entrance is located at the south of the office on the slope of the mill, with a 250-m long underground mining tunnel.

Level 5 & 6: The ore pass is connecting to the mine cave at an elevation of 180m. It is the largest mine cave of Lin Ma Hang.



Geology (Rock Samples)

Lin Ma Hang is dominated by Tai Mo Shan porphyry and Lok Ma Chau schist. Tai Mo Shan porphyry had gone through regional metamorphism to certain degrees forming mylonitized metatuff.

The mineralization occurs in a series of NW-SE striking fissure veins in themylonitized metatuff. The lens shaped veins, dipping between 15 to 60, have widths between a few millimetres and several metres and pinch over a strike length of over two kilometres.

There are two phases of hydrothermal veins formation. The initial coarse-grained, barren, milky-coloured veins are intruded by the latter metallic minerals bearing fine-grained quartz. The dominant metallic minerals found in the latter veins are galena, pyrite, sphalerite and chalcopyrite. Apart from lead, silver is contained within the galena. Besides copper, trace amount of gold is also carried in the chalcopyrite.



Safety

Nowadays, most of the supporting pillars had gone moldy with the risk of collapsing. There are a few ventilation wells in the bush near the mine cave. Visitors should stay alert from falling into the abyss. Visitors are strongly advised not to proceed to the mine alone without an experienced hiker or guide. Also, entering the cavern is prohibited.



Lin Ma Hang Village

The Lin Ma Hang Village is a Hakka village. Villager used to resides on both sides of the Sham Chun River. In 1898, "The Convention between the United Kingdom and China, Respecting an Extension of Hong Kong Territory" was signed between Qing government and the United Kingdom, indicating that the south of Sham Chun River was leased to the United Kingdom for 99 years. Hence, divided the village into two territories. Since then, some of the villagers had to cross the border to reach their farmland at the other side of the riverbank everyday.

During the Japanese occupation of Hong Kong, small-scale mining had been conducted by the Japanese. Lin Ma Hang villagers attempted to fight for the mine back thrice, and successfully damaged part of the Japanese mining site. However, some villagers had been arrested and beaten to death in this movement.





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