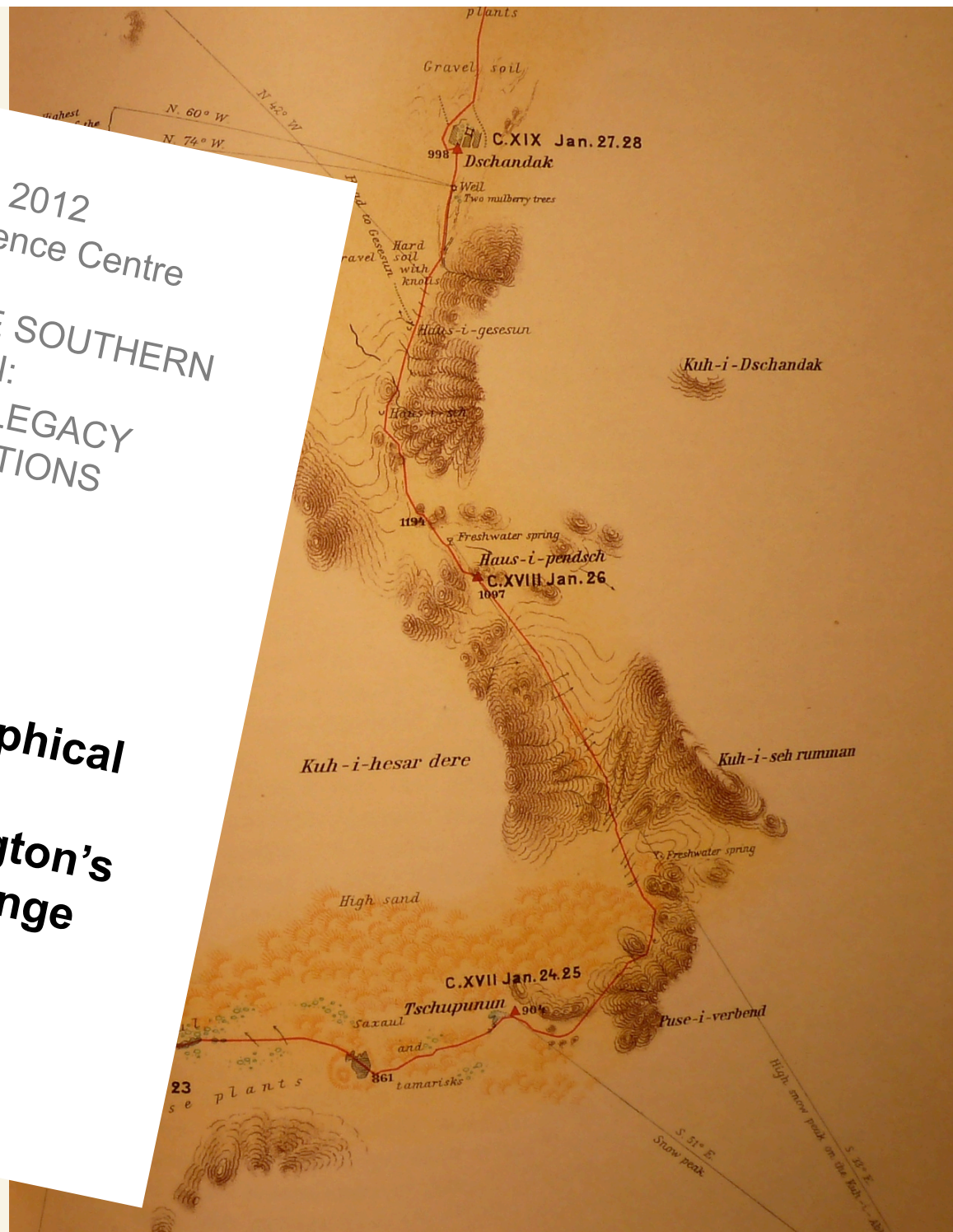


9th November, 2012
British Library Conference Centre

ARCHAEOLOGY OF THE SOUTHERN
TAKLAMAKAN:
HEDIN AND STEIN'S LEGACY
AND NEW EXPLORATIONS

**'An Interesting Geographical
Change':
Hedin, Stein and Huntington's
Surveys of Climate Change**

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Introduction

“It is nice to think that we are going to be given a new slant on our staple subject of discussion by a speaker from abroad.”

Ahlmann, Hans W., 1948. “The Present Climatic Fluctuation.” *The Geographical Journal*, Vol. 112, No. 4/6, pp. 165-193.

Abstract

Studying the contribution of the lakes of Central Asia to the discovery of global warming must touch on science policy in the early 20th century, the uneasy relationship that learned Europe used to have with the environmental history of colonial Asia, and the production and mobility of new and potentially troubling knowledge.

I intend to provide an account of how three independent scholars engaged the Royal Geographical Society of London and the international geography community. I will intertwine their maps, private letters, travelogues and scientific reports from the field with the history of theorizing on climate change.

My analysis of Sven Hedin, Ellsworth Huntington and Aurel Stein's interactions with their colleagues promises to challenge the current narrative on the discovery of global warming.



The Altai Gobi Desert after the rains of early July 2006.



The Altai Gobi Desert before the rains of early July 2006.

Nouvelles d'Asie. — Le *D^r Scen Hedin*, dont *M^{lle} Alma Hedin* nous a remis une lettre datée de Téhéran le 24 décembre 1905, annonce à la Société qu'il entreprend un cinquième voyage. Il se rend par le Dehti-Kouvir dans le Seistan pour gagner l'Inde et le Tibet; nul doute que dans cette nouvelle campagne le célèbre explorateur ne fasse une abondante moisson de documents scientifiques.

La Perse orientale, l'Afghanistan et les confins du Baloutchistan reçoivent la visite de voyageurs de nationalités diverses. Notre collègue, M. le *commandant de Lacoste*, muni d'une mission de la Société de Géographie, consacra le reste de cette année à un voyage d'étude dans ces contrées.

M. Eugène Gallois, qui nous traçait au moment de son départ les grandes lignes de son itinéraire dans la Turquie d'Asie, écrivait, le 10 février, que son projet avait dû être modifié dès le début. Il commencera par la Syrie et compte pousser vers le djebel Haouran. Prenant ensuite au nord, il visitera Hamah et Alep, puis Antioche, Alexandrette, contournera le golfe de ce nom et parcourra l'Adana avant de pénétrer dans l'intérieur de l'Anatolie.

Bulletin des Géographie commerciale

News from the field

Scientific travellers of many nations crisscrossed Iran and Turkey in winter 1905-06. "Nouvelles d'Asie", *Bulletin de géographie commerciale*, 15th May, 1906.

Communication policy

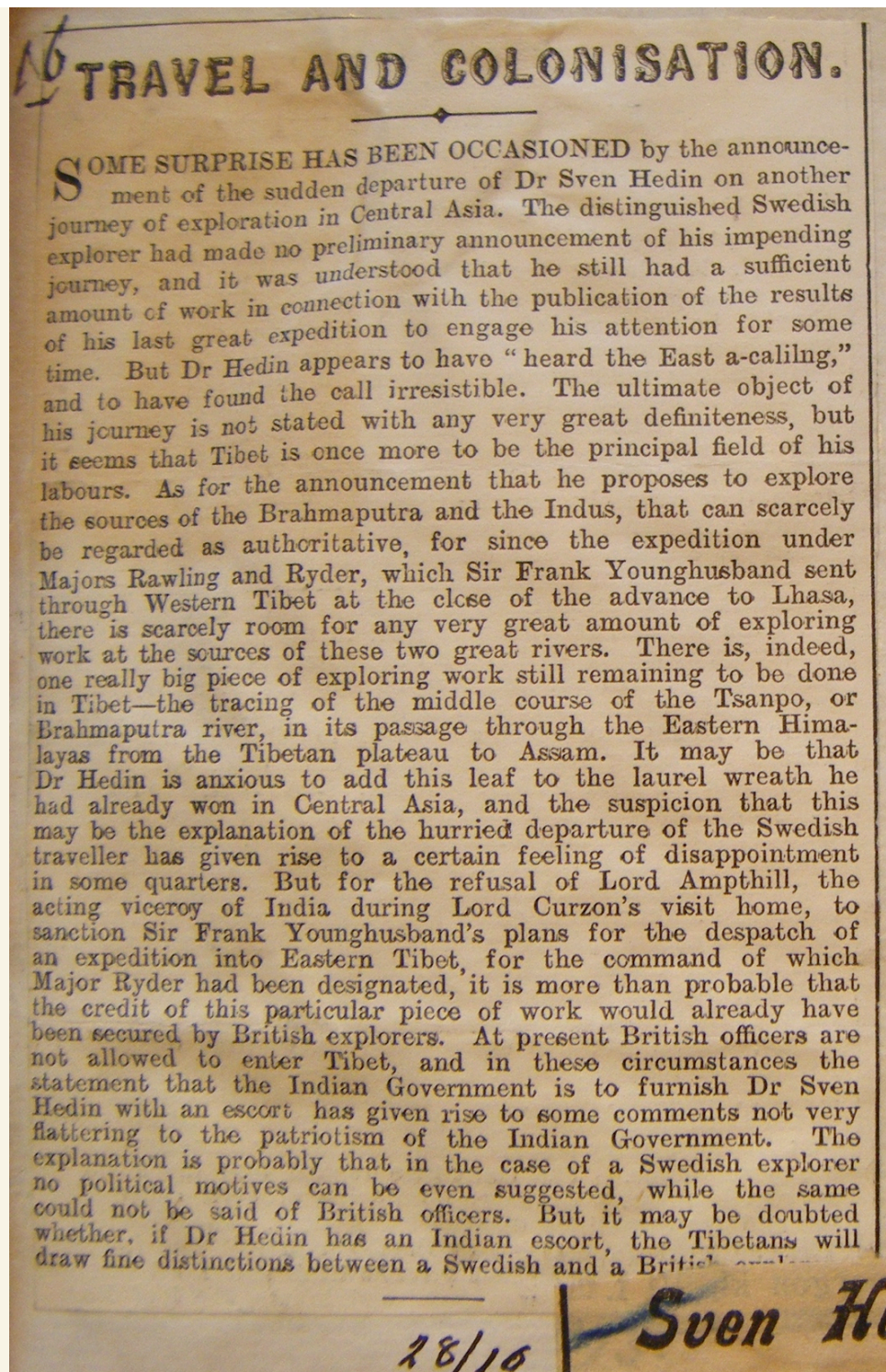
The announcement of Hedin's sudden departure for Central Asia came without research plans that would have been publicly defined.

With support from the Indian government, Sven Hedin would explore the sources of the Indus and Brahmaputra, just when entrance into Tibet was denied to British officers.

Nothing is said about the curious route through Iran that Hedin took to reach India.

"Some surprise has been occasioned..."

Travel and Colonisation, 28th October 1905



“Vive la concurrence!”
(cartoon title)

Scientific claims
and national glory
seek justice in the
international
arena.

From left to right:
a placid clerk from
the *Times*, and
Fridtjof Nansen
and Sven Hedin,
two nationalist
explorers .



Great men at home

Note the respective sizes of Scandinavia, Europe and Asia in this cartoon from Stockholm.

For explorers, the true battle is on the home front, securing the best seats at the yearly banquets of scholarly societies.

Sven Hedin had found in Albrecht Penck, the dean of German geography, a powerful ally even before his expulsion from the RGS.



Herzlich Willkommen!

Der Rektor
der Friedrich-Wilhelms-Universität
Prof. Dr. Albrecht Penck
Geh. Reg.-Rat

Berlin

Knesebeckstraße 48.

Enduring friendship

Prof. Albrecht Penck's welcome to Dr. Sven Hedin when he came to Berlin for a university lecture. "Die Deutschen Fronten" was the timely topic of Hedin's talk. Berlin, 14th May, 1918.

Service de MINUIT du 22 Avril 1904

F R A N C E

A LA SOCIÉTÉ DE GÉOGRAPHIE

La Société de Géographie a tenu son assemblée générale de 1904 ce soir à 8 h. 1/2 à son hôtel, boulevard St Germain, sous la présidence de M. Grandidier, membre de l'Institut, président de la Société.

Le président a fait l'historique des faits et a parlé des missions en cours.

Ensuite, M. le baron Hulot a donné la liste des prix décernés. Voici cette liste :

Grande médaille d'or de la Société, à M. le Dr Sven Hedin, pour ses explorations dans l'Asie centrale.

Prix Herbert-Fournet (médaille d'or et 6.000 fr.), à M. le capitaine E. Lenfant, pour son exploration Niger-Bénoué-Tchad.

Prix Ducros-Aubert (médaille d'or et 1.400 fr.) à M. Alfred Lacroix, de l'Institut, pour ses missions à la Martinique.

Prix Pierre-Félix-Fournier (médaille spéciale et 1.300 fr.) à M. Paul Pelet pour son "Atlas des colonies françaises".

Prix Louise Bourbonnaud (médaille d'or), à M. le lieutenant Charles Chédeville, pour sa carte de l'Afrique occidentale française (3e territoire).

Prix Conrad Malte-Brun (médaille d'or), à M. le lieutenant L.-P. Drot, pour ses travaux cartographiques relatifs au Haut Dahomey.

Peer recognition

Scholarly societies, like the Société de géographie de Paris, decided who to honour for his contributions to cartography.

Minutes of the Société's meeting of 22nd April 1904.

YALE UNIVERSITY
DEPARTMENT OF THE SOCIAL SCIENCES
NEW HAVEN, CONNECTICUT

December 11, 1935

Dr. Sven Hedin
N. Malarstr. 66
Stockholm, Sweden

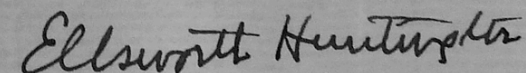
Dear Dr. Hedin:

Please accept my thanks for your summary of your recent work contained in "Neue Forschungen in Mittelasien und Tibet." It must be most gratifying to you to see how these later results amplify your earlier work. It is to me extremely interesting to see the map of Lop Nor with a lake covering a considerable part of the area which I traversed in 1906. It makes me think of the time when my camels broke through the crust and I was nearly drowned in the mud of the old lake bed.

I hope your plan for coming to America has materialized, and that you will visit New Haven. I have done my best to arrange for a university lecture here at Yale, but I have not heard what has been the final result.

With cordial regards,

Yours sincerely,



Ellsworth Huntington

Collegiality at work

Thank-you letter from Huntington to Hedin, with an invitation to lecture at Yale.

1 Carlton House Terrace
Nov.26. 1909

My dear Sir Sven Hedin

Now that it is all over, may I write a ~~line~~ ^{line} of congratulation to you on an honour in which I am proud to have had a share.

I was annoyed in the spring that the India office had not done it on their own account and so I took upon myself to write to Lord K. ~~Curzon~~ ^{Curzon} who showed what I wrote to the King.

In the way we brought about the happy result which however would gratify me much more if I felt ~~assured~~ ^{assured} that it had been found acceptable ~~to~~ ^{by} you.

Yours ever

Curzon

Public recognition

Letter of congratulations from Lord Curzon, Viceroy of India and President of the Royal Geographical Society, to Sir Hedin, KCBE.

London Library, St. James's Square, S.W. 1.

July 12 1923

Dear Dr Hedin

I am sending you The Times Literary Supplement. I was instrumental in having this article written I hope you will approve of it. I did not write it.

Ever yours sincerely
C Hooper Wright

Your political views
still rouse many to anger

DB.W

Dealing with the press

How to get reviews in the *TLS* despite the hostility of the British geography community.

Major expeditions to the Kevir, Taklamakan and Gobi Deserts

1893-1897, 1899-1901,
1905-1908: Sven Hedin

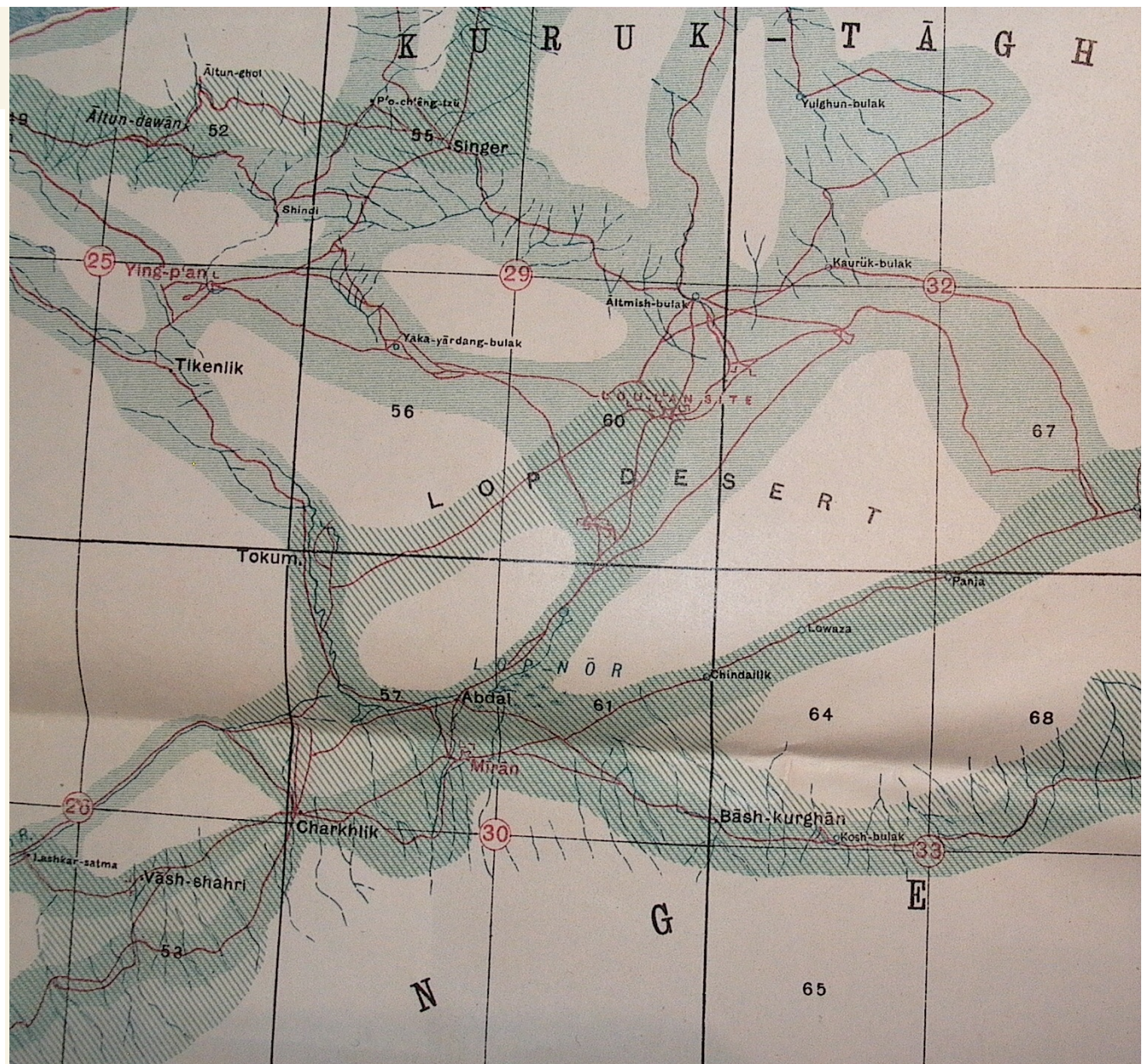
1900-1901, 1906-1909,
1913-1915: Aurel Stein

1903 and 1905-1906:
Ellsworth Huntington

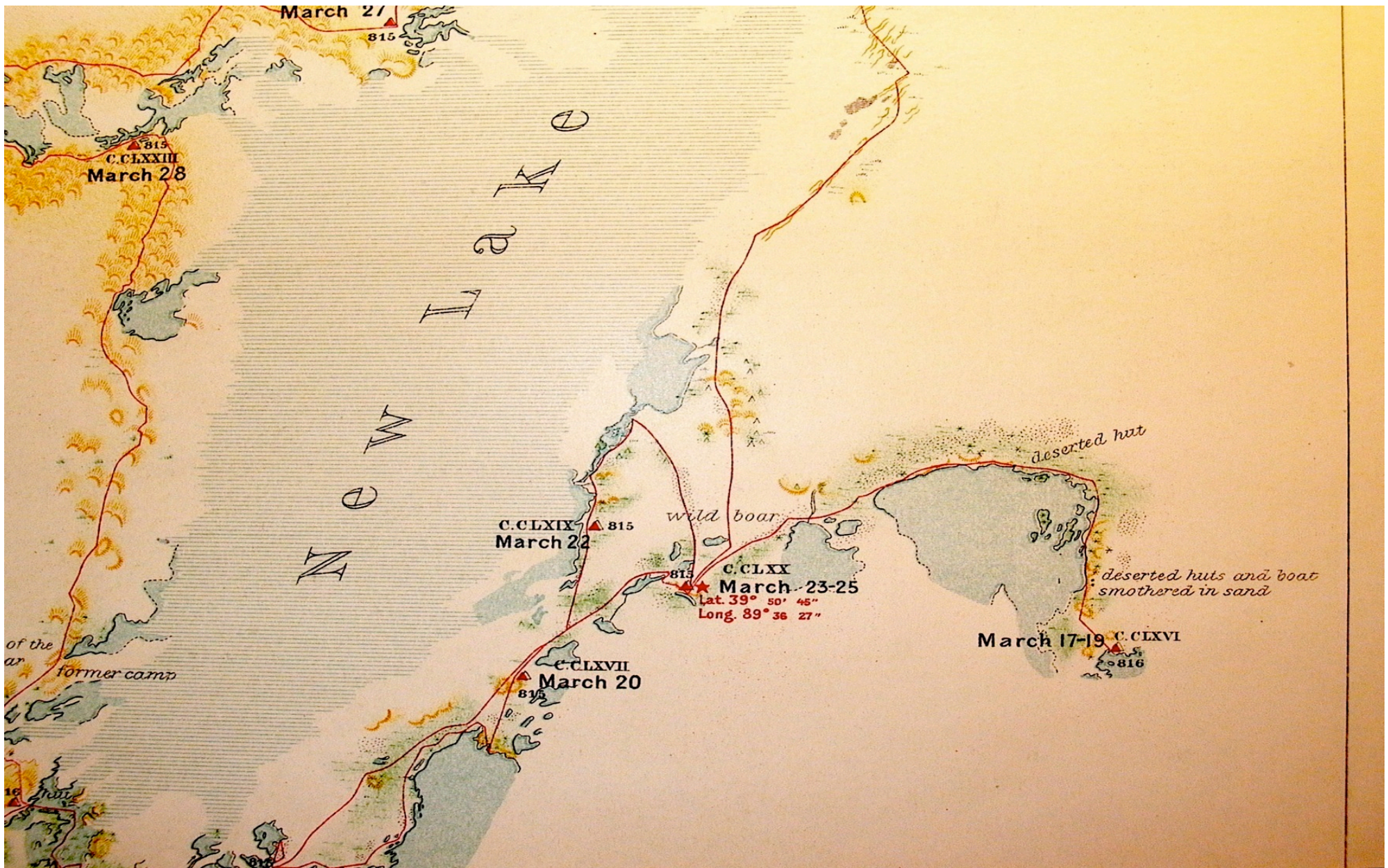
1907-1909: Piotr Kozlov

1921-1930: Roy Chapman
Andrews

1927-1935: Sino-Swedish
scientific expedition to the
North-western provinces



**Index to Maps of Portions of
Chinese Turkistan and Kansu**
from surveys made during the explorations of
Sir Aurel Stein, KCIE, 1900-01, 1906-08, 1913-15




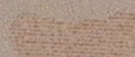
Sven Hedin's map of Lop Nor

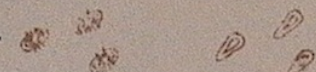
Latitude Stn. Azimuth Stn. Triangulation Stn..... ⊕ ⊕ ⊕

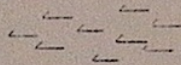
Heights: by theodolite; by clinometer..... 13277 . 12300 c

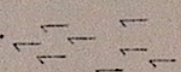
Heights: by barometer or hypsometer..... 12770

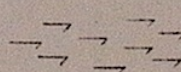
Perpetual snow (approximate)..... 


Drift-sand area 


Erosion terraces: Mesa; Yārdang 

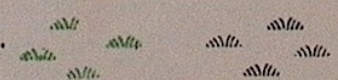
Hard salt crust 

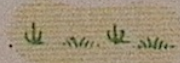
Hard salt-encrusted clay 

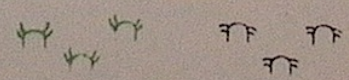
Soft salt-encrusted clay 

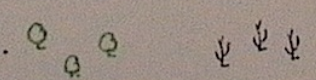
Cultivation: unsurveyed 

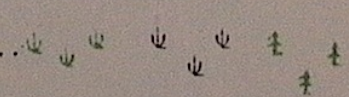
Edges of cultivation, etc., where surveyed 

Reeds or low scrub: living; dead 

Sandy tract with scrub or jungle 

Tamarisk cones: living; dead 

Wild poplars (Toghraks): living; dead 

Tamarisks: living; dead. Conifers 

Map legend

Aurel Stein's map of Loulan, with precise information on past and present land covers.



THE SALT PLAIN OF LOP

Huntington's photograph
of the bed of Lake Lop Nor

The Pulse of Asia

“Best geographical exposition of the time [...] novel and interesting conclusions adduced from the array of evidence.”
Anonymous review, New York, 1908.

THE PULSE OF ASIA

A JOURNEY IN CENTRAL ASIA ILLUSTRATING
THE GEOGRAPHIC BASIS OF HISTORY

BY

ELLSWORTH HUNTINGTON

ILLUSTRATED



Deposition från
K. INGL. VITTERHETS HISTORIE
OCH ANTIKVNITETS AKADEMIEN

BOSTON AND NEW YORK
HOUGHTON MIFFLIN COMPANY

“Is it true that the soil of Central Asia is drying up?”

Known to geographers under various names in the 1900s, climate change was a phenomenon that was:

- Historical and geological,
- Regional and global,
- Progressive,
- Linear or cyclical,
- Recorded, quantifiable and mappable
- Informed by field work from Central Asia.

There was however no consensus among geographers on:

- The significance of climate change for human societies,
- The legitimacy of research on climate change.

M. N. S. (*Angers*).

Est-il exact que la surface terrestre et, en particulier, le sol de l'Asie centrale, soient en voie de dessiccation ?

Oui, les explorations récentes, ainsi que de nombreux phénomènes, ont prouvé surabondamment qu'une zone, s'étendant du fond de l'Asie centrale jusqu'au sud-est et à l'est de la Russie, est en train, depuis plusieurs siècles, de se dessécher. Au cours de sa dernière expédition, Sven Hedin a fait une foule de constatations qui établissent que les lacs nombreux et étendus du sud du Tibet n'ont plus la superficie qu'ils possédaient autrefois. On peut s'en rendre compte par les traces qui décèlent les niveaux antérieurs de l'eau et qui se trouvent souvent à une hauteur considérable au-dessus du niveau actuel des lacs.

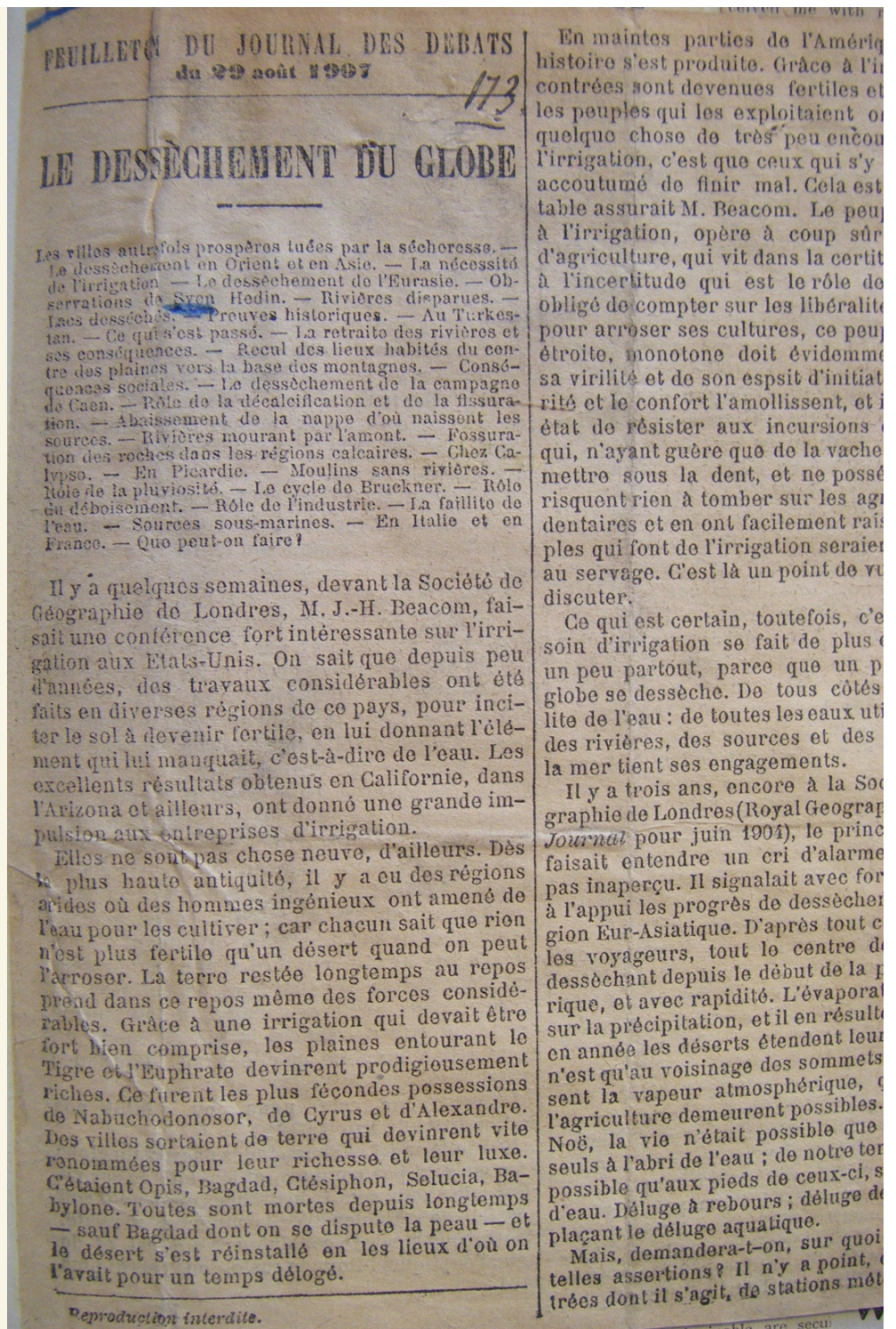
Dans le Turkestan oriental, on a fait également un grand nombre d'observations d'où l'on peut conclure qu'il y a deux mille ans le climat de cette région était encore supportable. Dans le voisinage du Lopsee, qui n'est plus aujourd'hui qu'un désert, habitait autrefois une population dense et laborieuse, et le Tarim était, dans sa partie centrale, traversé par une route très fréquentée. Ce passé ne se rappelle au souvenir que par quelques misérables restes qu'assiège le sable du désert.

Le dessèchement a aussi fait des progrès dans les steppes caspiens, le long du cours inférieur du Volga, et il n'est pas impossible que la dernière catastrophe qui s'est produite dans cette région et qui est due à un retrait soudain des eaux de la mer d'Azov, ne soit un phénomène

A short list of discussion topics on climate change and Central Asia in the 1900s

- Desiccation in Asia and the Middle East
- Sven Hedin's observations
- Historical evidence from Turkestan
- Ancient prosperous cities killed by drought
- Vanished rivers and dried-up lakes
- Social consequences of river retreats
- Need for irrigation
- Human settlements moving to mountain piedmont
- [...] Bruckner's cycle
- Impacts of rainfall, logging, and manufacturing
- Water deficit and undersea sources
- Desiccation in Italy and France
- What can we do about climate change?

“Le dessèchement du globe”, *Feuilleton du Journal des débats*, 29th August 1907.





Conclusion



Sven Hedin, *Eine Routenaufnahme durch Ostpersien*. View from Tchupunun, Jan. 24, 1906.

| | |
|-----|------|
| I | II |
| III | IV |
| V | VI |
| VII | VIII |



Sven Hedin, Ost-Persien, Vol. 2.
Karte von Ostpersien von Oberst H.
Byström

Findings

Once upon a time, geography and climate studies had simplicity as one of their characteristics, scholarly societies dominated professional networks, and conceptual models and the logistics of data collecting and analysing obeyed the demands of cartography.

One century ago, climate change as exposed by explorers generated a passionate debate on the past and future of humankind. The Kevir, Taklamakan and Gobi deserts were meticulously surveyed, and their climate extremes painfully recorded by parties of geographers, orientalists and archaeologists armed with the best instruments of the day. Journalists and the public fêted their achievements when these explorers came back to London, Paris, and Berlin with long columns of figures, measurements and bearings.

Summary

My paper has addressed the controversy raised by the gap between the rather reliable reconstruction of the environmental history of the ancient civilisations of Inner Asia and uncertainties on what this reconstruction meant for the contemporary scientific ethos and the early 20th century world-order.

Thanks to the exploration of Central Asia, two “interesting geographical changes” eventually occurred: climate change was documented and discussed, and the geography profession elaborated new criteria for review and validation.

THANK YOU FOR YOUR ATTENTION!