

GeoGazette

Summer 2015

Volume V Issue II

Inside this issue:

Message from the President	1
Ritual of the Calling	2
Professional Development Opportunities	3
Background Substances in Soils Project	4
Geoscientists Canada Update	5
Professional Practice Exam	6
Executive Director's Report	7
Registrar's Report	8
Geo-Travels	9-11
Social Licensing Workshop	12

Message from the President

Colleagues:

It is my privilege and honor to serve as your President for the 2015 – 2016 term. As a founding member, I have seen many changes from the early days following the proclamation of the Geoscience Professions Act in 2002. My active involvement in the Association only became a reality in late 2011, with my appointment to Council. In that brief period of time I have been involved with the strategic planning process. I have also seen improvements to the way the Association is administered. There have been great strides made towards inter-provincial cooperation on development of common professional practices through Geoscientists Canada and in consultation with universities offering geoscience programs. As a constituent member of Geoscientists Canada, our Association has a strong voice at the national level working on your behalf.

In the recent past, the Association was a major stakeholder participant in the development of the Geoscience Professional Practice Guideline for Conducting Phase 1 and Phase 2 Environmental Site Assessments in Nova Scotia. One of the key components of the Guideline is the use of Site Professionals. In 2014 we made a submission to the Department of Natural Resources to incorporate the requirement for Qualified Persons for submission of technical reports as part of the on-going Mineral Resources Act review. Similarly, we have expressed an interest to the Department of Environment for participation as a stakeholder in the development of new Well Construction Regulations.

As we go forward, we will continue to promote best practices for the protection of the environment and the general public. It is hoped that the proposed new Geoscience Professions Act will be proclaimed by the spring 2016 sitting of the legislature. In anticipation of this we are working on revisions to the By-Laws. This coming fall we are anticipating presenting to the members a new electronic method of tracking your Continuing Professional Development hours in order to demonstrate and maintain our professional proficiencies.

The Association is grateful to all those who have volunteered their valuable time and expertise in the past and those who continue to do so. The Association could not function without this commitment. We are always looking for people to volunteer on committees, boards and Council. As an added incentive, time volunteered in this manner counts towards Continuing Professional Development hours.

Respectfully submitted,
Paul Batson, P.Geo.



The Ritual of the Calling (Earth Ring Ceremony)

Patrick J.C. Ryall, PhD, P.Geo, FGC.

This year marked the Fifteenth Ingathering for the Ritual of the Calling for geoscientists in Nova Scotia. The ritual is a formal ceremony which geoscientists attend voluntarily. Participation is limited to those students who are about to graduate with a geoscience degree, and practicing geoscientists who would like to get a ring. The Ritual is structured to give geoscientists a strong sense of their responsibility to the public, their peers, their profession, and themselves.

More than 430 geoscientists in Nova Scotia have made the commitments and have received an Earth Ring. This year's participants, shown in the picture showing off their rings, are: Jason Amyoony, Emaline Atherton, Thomas Bagley, Andrew Blackmer, P.Geo, Laura Broom, Laura Carter, Brad Clarke, Richard Creagan, Victoria Desjardins, Sean DesRoches, John Edwards, Heather Evans, Evan Gladney, Eileen Haskett, Jillian Kendrick, Steve Krbavic, Roxanne LaCombe, Shane Legere, P.Geo, Beth Lymer, Brett McCarthy, Jennifer McDonald, P.Geo, Dan Meagher, Sarah Micheau, Page Montgomery, James Norrie, James Nott, Mark Peters, Celine Porter, Ryan John Sabeau, Chris Sangster, Catherine Sedge, Jesse Sherwin, Ian Stewart, Jessica-Ann Turner, Alicia Webster, and Connor Wentzell. The students are from Acadia, Dalhousie and Saint Mary's.

Also participating in the ceremony were Patrick J. C. Ryall, P.Geo, FGC, Paul Batson, P.Geo, Cliff Stanley, P.Geo, FGC, Belinda Culgin, P.Geo, and David C. Carter, P.Geo, FGC.

The Ritual was held at the Dalhousie University Club and was followed by a delicious dinner. The cost of dinner for the students was subsidized by Geoscientists Nova Scotia, which was greatly appreciated by the students.

The Earth Ring ceremony is about a calling to service. It signifies that the participant has joined a profession dedicated to seeking the truth in Earth Science and applying this to the service of people. It is an honorable profession with a long tradition of service.



Professional Development Opportunities

The following is a list of selected current professional development opportunities and conferences available:

IAH Atlantic Canada Webinar Series:

<http://www.gwinsight.com/podcasts/>

CANQUA 2015, August 17-20, St. John's, NL:

<http://canqua2015.com/>

Environmental Concerns in Rights of Way Management, September 20-23, Halifax, NS:

<http://www.rights-of-way.org/>

ARC 2015 "Reclamation...Opportunity Knocks" - October 20-21, 2015, Fredericton, NB

[Call for Abstracts](#)

IAH-CNC 2015 Waterloo, October 27th to 30th, 2015. Waterloo, ON:

<http://www.iah-cnc2015waterloo.ca/>



Newsletter Advertising

At the June 23, 2015 meeting, Council approved revisions to the APGNS Communications Policy. The new policy includes the redefined Terms of Reference for the Communications Committee as well as an approval to accept print advertising in the **GeoGazette** newsletter.

It is anticipated by the Communications Committee and Editorial Board that advertising will be accepted for review and approval and publication starting with in January / February 2016 issue.

For more information, or to submit a camera ready layout material, please contact the Registrar.

GeoGazette advertising rates:

Location / Layout	Standard non-member rate per issue	Standard member rate per issue*
full page	\$600.00	\$550.00
½ page	\$400.00	\$350.00
¼ page	\$250.00	\$200.00

- full year advertising subscriptions will receive a 10% discount

David C. Carter, P.Geo, FGC,
Executive Director and Registrar

Development of Guidance for Background Concentrations of Certain Substances in Soils

Paul Currie, Nova Scotia Environment (NSE)

Nova Scotia's contaminated sites regulations and associated protocols outline the requirements for the notification and subsequent completion of environmental site assessments of contamination in soil, groundwater, surface water and sediment.

A key and common issue faced by site professionals and responsible parties in determining their obligations for notification of contamination, as well as site assessment and remediation, relates to determining background concentrations of substances of concern. This issue has become more important in view of recent regulations implemented by NSE respecting mandatory notification of contamination, based primarily on generic soil quality standards for land-uses that have been adopted or modified from existing sources.

To address these concerns, NSE has provided guidance and a list of substances that may be considered background occurrences within the Notification of Contamination Protocol made under the regulations. If a substance is listed as a potential background occurrence, and the *protocol criteria are met*, notification as a contaminated site is not required.

For certain parameters, however, namely inorganic metals and polynuclear aromatic hydrocarbons (PAH's), regional background concentrations may not have been considered in the derivation or publication of guidelines, particularly those published at a national level, such as the Canadian Council of Ministers of Environment (CCME) guidelines. To improve the local understanding of background concentrations of substances of concern, NSE is currently working on a project in partnership with staff at the Department of Natural Resources and researchers at Dalhousie University.

In the past number of years, various agencies have initiated or completed projects to obtain quantitative data related to background soil chemistry conditions in rural areas of the province, including Environment Canada, Health Canada, and the Department of Natural Resources. In addition, extensive work was completed related to urban background soil chemistry in the Sydney area of the province as part of the Sydney Tar Ponds and Coke Ovens Remediation project.

The project scope includes a review of these existing datasets, in addition to a limited sampling program in urban areas of HRM to supplement the existing background soil analytical data. The goal of this project is to produce publically available quantitative data in both rural and urban areas of the province and additional guidance for substances considered as potential background occurrences in Nova Scotia soils.

This project is expected to provide a foundation for on-going soil chemistry data collection and analysis in relation to the assessment and remediation of contaminated sites. For further information on the project, you contact me at paul.currie@novascotia.ca



Geoscientists Canada Update

Jeff Parks, P.Geo

The 38th Meeting of the Board of Directors and the 18th Annual Meeting of Members occurred on Saturday June 6, 2015 in Saint John, New Brunswick. The event was hosted by the Association of Professional Engineers and Geoscientists of New Brunswick.

The body of the Directors meeting was concerned mainly with the selection of either proportional “3:2:1” or one director per Constituent Association (CA) “Status quo” appointment model concerning future size and composition of the Board and whether in future Directors should serve as Officers; receipt and acceptance of strategic priorities; and, Admission Support Tools (AST) Project Phase I completion reporting and consideration of plans for an AST Project Phase II.

After several years of debate (some heated) over the future representation of the Board it was passed with little fanfare that the Board accept the status quo with Directors now serving as Officers - only one director per Association. This decision, I must say, could have not been achieved without your APGNS representatives standing up against some very large organizations and arguing for the one association - one vote model in governing Geoscientists Canada affairs, rather than the long proposed proportional representation that Alberta, BC and Ontario was promoting. The articles and bylaw changes that were required to accomplish the changes in Board structure were also passed.

The Board received and accepted the strategic priorities that were brought forward by the CAs. A plan will be developed on how to address these in future work plans. The AST Project Phase I is now complete. The main outcome of the project was to develop Competency Profiles that could be used in assessing foreign-trained geoscientists who are entering licensure in Canada. A draft of the Phase II project proposal was put forward to the Directors but sent back for redraft to better reflect the intent of the motions on project direction put forward by the Canadian Geoscience Standards Board, who has a mandate to develop entry to practice guidelines for Canada.

The Members had a brief Annual Meeting that ratified several motions put forth in the normal course of business. No action items were noted. Aside from these meetings several appointments and elections were held. I am pleased to announce that Hendrick Falck, director for Nunavut/Northwest Territories, was elected President-elect of Geoscientists Canada. President-elect George Eynon, Alberta, was installed as President ([press release](#)).

Since 2013, Geoscientists Canada has awarded fellowships to individuals who have served Geoscientists Canada or their Association in some significant capacity (President, tens years of service, etc). This year two individuals from Nova Scotia have been elected as Fellows—Scott McCarthy, P.Geo.—for service as President to an Association (NS), and Diane Webber, P.Geo.—for 10 years of service to the Association on various boards and committees including the Admissions Board and Council. Please help to congratulate these individuals on their achievement as Fellows of Geoscientists Canada. An awards reception is being planned for later in the year when APGNS will present the new Fellows. Details will be forthcoming.

Update to the National Professional Practice Exam

Robert Stewart, P.Geo, NPPE Advisory Committee representative and
David C. Carter, P.Geo, FGC, Registrar

Applicants for professional registration with APGNS are required to successfully complete the National Professional Practice Exam (NPPE). The NPPE has been made available to applicants and members for several years. Starting in October 2015 there are changes coming to the format of the exam. APGNS and most of the other Canadian geoscience regulatory bodies will be switching from a paper-based exam format to a computer-based exam.

Paper Format (Until July 20, 2015 Session)	Computer Format (Effective October 19, 2015 Session)
Paper-based exam, required for all new applicants and available for all members	Computer-based exam, required for all new applicants and available for all members
Administered only at a location designated by APGNS	Administered at a location designated by APGNS, as well as at various third-party testing centres in Nova Scotia and worldwide
Study materials are available for purchase directly from publisher and discount pricing is based on APGNS rates	Study materials will continue to be available for purchase directly from publisher and discount pricing is based on APGNS rates
Preparation for the exam through the Engineers Nova Scotia one day workshop	Preparation through the Engineers Nova Scotia workshop will still be recommended, however, a computer-based practice exam will be available for purchase and a pan-Canadian, web-based preparation seminar is under development.
Exam for the Nova Scotia session is offered on one day in the morning	Exam session for the Nova Scotia applicants session will be offered on one day, in the morning Exam session for outside Nova Scotia may be available through at several sessions, up to a three-day period, with morning and afternoon sessions
3 hours total exam time allowed	3.5 hours total exam time allowed
100 multiple choice questions (2 hours)	110 multiple choice questions (2.5 hours)
Cost, until July, 2015, is \$250.00 per exam Cost for the Engineers Nova Scotia workshop is administered by Engineers Nova Scotia	Cost, effective October, 2015, will be \$275.00 Cost for the Engineers Nova Scotia workshop is administered by Engineers Nova Scotia
Approximately four to six weeks for results	Approximately three to four weeks for results

The Committee is also working on a computer-based preparation / practice exam and an on-line preparation seminar is also being planned.

If you have questions regarding the exam or the new format, or to apply to write the NPPE, please visit the APGNS website (www.geoscientistsns.ca) or contact the Registrar, David C. Carter, P.Geo, FGC at registrar@geoscientistsns.ca or 902-420-9928.

Executive Director's Report

David C. Carter, P.Geo, FGC

The revised Geoscience Profession Act and Geoscience Practice Regulations have been submitted to the Nova Scotia Department of Justice. The legislation is currently on hold while the government conducts a review of all professional legislation. This review may be complete by the spring of 2016 and it's hoped that it will be tabled at that time.



APGNS has been working with the Geoscientists Canada and the Canadian Geoscience Standards Board on the Admissions Support Tools (AST) Project. This federally funded project produced documents including the Entry-to-Practice Competency Profile and the Prior Learning Assessment and Recognition. Both of these may be useful to the APGNS Admissions Board in evaluating applications. Planning is underway by Geoscientists Canada to apply for funding for Phase II of the AST Project.

Council has approved the revision of the Admissions Board Policy and Procedures to incorporate the results of the AST program as well as the Communications Policy to guide the Communications Committee on website and newsletter issues. Council has also adopted addendums to several by-laws in preparation for the pending legislation changes, for example the Nominations and Elections procedure. Council and the Board are also working on a Member-in-Training Program and an Applicant Self Assessment Worksheet Tool and these are expected to be approved before year end. The Continuing Professional Development and Competency Assurance Program and program forms are in final development and are also expected to be available this fall.

The electronic payment system, delivered through the secure link on the Association website continues to be well used by the members. We have made minor changes to the tracking system for our bookkeeping and tracking.

There are always opportunities for members and MIT's to get involved with various Boards and Committees. The Executive and Council have recognized that it is important for the Association to incorporate succession planning into these groups so that they continue to function with new ideas and an Association memory. Please contact a Council, Board or Committee member or the Registrar if you are interested in getting involved. It has been noted that this Association "punches well above our weight class" based on the dedicated and competent volunteers who are the heart of the Association.

For more information, question or comments, please contact registrar@geoscientistsns.ca or you can reach me directly at 902-420-9928

David C. Carter, P.Geo, FGC.
Executive Director and Registrar

Please note our new mailing address:

**Geoscientists Nova Scotia
P.O Box 91
Enfield Nova Scotia B2T 1C6**

Registrar's Report

David C. Carter, P.Geo, FGC

As of June 30, 2015 the APGNS Register has the following membership totals:

Registration	P.Geo	License to Practice (LTP)	Member-in-Training	Certificate of Authorization
Total	173	9	16	49

New Registrants in 2015:

Alan Philippe, P.Geo, consultant
 John Kozuskanich, P.Geo, Stantec
 Grant Wach, P.Geo, Dalhousie University
 Evan Bianco, P.Geo, Agile Geoscience
 Jeffrey Faulkner, P.Geo, Strum Environmental
 Mark Devitt, P.Geo, Suncor Energy
 Geoffrey Baldwin, MIT, NSDNR
 Michael Power, MIT, Dillon Consulting
 Maria Whitehead, MIT, DMT Geoscience
 Michael Reid, MIT, Cogonov
 Steven Usher, P.Geo, SLR Consulting
 Robert Cuthbert, P.Geo, NSE (reinstated)

2015 Corporate Registrants (C of A holders):

XCG Consulting, Dartmouth, N.S.
 Hy-Grade Geoscience
 Atlantic Petrophysics Limited
 LVM / Maritime Testing Ltd
 CBCL Limited
 Arc Geobac Group Inc
 GHD
 Mercator Geological Services Ltd
 Tower Resources Inc
 Pinchin LeBlanc Environmental Ltd
 Hudgtec Consulting Ltd
 earth-water Concepts inc
 Fracflow Consultants Inc
 SLR Consulting (Canada) Ltd.
 Strum Environmental
 Premier Environmental Service Inc
 H2OGEO Environmental Services
 AMEC Environment & Infrastructure
 Golder Associates Ltd.
 M.A. O'Kane Consultants
 Stantec Consulting Ltd
 Fundy Engineering & Consulting Ltd
 Dillon Consulting Limited

E. Macdonald Geoconsulting Limited
 Swinden Geoscience Consultants Ltd.
 M.Z. Geoscience Inc
 Kent W Simpson Consulting
 Integeos Inc.
 WSP Canada Inc. (formerly Genivar)
 Rochon Engineering LP
 AECOM Canada Ltd
 Tetra Tech EBA Inc.
 Atlantic Gold (formerly Acadian Mining)
 Bluenose Gold Exploration Ltd
 Craig Hydrogeologic Inc.
 McGregor Geoscience
 Agile Geoscience
 Halle Geological Services Ltd.
 Atlantic Marine Geological Consulting Ltd.
 Burton Geological Exploration Inc.
 Avalon Rare Metals
 IAMGOLD Corp
 Cogonov
 Thundermin Resources
 Atlantic Water Investigations Ltd.
 Stea Surficial Geology Services

Resigned and/or Stricken from the Register in 2015:

Gary McLearn (resigned)
 Mitchell Barteau (stricken)
 Alan Ruffman (stricken)
 Andrew Peach (resigned)
 Brad Hayes (resigned)
 Ecology Action Centre (stricken)
 SNC Lavalin (resigned)
 TBL Resource Solutions (resigned)
 Ed Layzelle (resigned)
 Jamie Burns (resigned)
 Christy Cunningham (resigned)
 Ressources Appalaches (resigned)
 H.J. Cross Hydrogeo (resigned)

Geo-Travels

Scott Swinden, P.Geo

For visitors to Africa, some of the most enduring memories center around the wildlife. Any opportunity to spend some time in an area of abundant African wildlife is sure to be richly rewarded. Although the best known safari regions are the plains of Eastern Africa, particularly Kenya and Tanzania, there are many other areas that provide incredible opportunities to see abundant and diverse African wildlife in a natural setting. Etosha National Park in northern Namibia is one of these.



For most geoscientists, Namibia is probably best known for the incredible mineralogical diversity of the Tsumeb mines or for the diamictite outcrops that support the theory of "Snowball earth". The geological setting of Etosha National Park is less well known, but no less important to the country. The park is centered around a very large (130 km² x 50 km²) salt pan that occupies a shallow depression in the Kalahari Plain. The pan, which is large enough to be easily visible from space, is usually dry and covered with white salt crusts (hence the name : "Etosha" which means "Great White Place" in the Ovambo language). However, in the rainy season from January to April, local rivers deliver water to the pan and it can fill with water up to a depth of 10 cm or so. The Etosha Pan forms the lowest point of the Ovambo Basin, a large intracontinental sedimentary basin, floored by Mesoproterozoic rocks of the Congo Craton. It occupies a paleo-lake that formed some 5 to 7 million years ago and reached its maximum extent of about 55,000 km² about 3 million years ago (if that lake were there today, it would be the third largest on earth). Etosha Lake was eventually starved of water by erosional capture of its rivers.

The depression that hosts the pan is flanked, mainly on its southern side, by a series of natural and man-made water holes that attract a huge diversity of wildlife to the area, particularly in the dry seasons from June to October when surface water is otherwise scarce in this part of Namibia. The watering holes attract a diverse and numerous wildlife community that makes Etosha one of the best wildlife-viewing locales in southern Africa.

Etosha is home to hundreds of species of mammals, birds and reptiles. It was first visited by European explorers in the mid 1800's who remarked on the immense numbers of animals that inhabited the region. An early American explorer proclaimed that "all the menageries of the world turned loose would not compare" to the wildlife he saw around him. It was pro-



Figure 1 Map of Etosha Park with the principal lodges and camps

Geo-Travels (con't)

claimed a game reserve in 1907 by the then Governor of German South West Africa. At the time it encompassed more than 100,000 km² and extended from the Etosha pan all the way westward to the Skeleton Coast on the Atlantic Ocean. At the time it was the largest game reserve in the world. Over the years, the boundaries have been reconfigured, and the current National Park of about 22,000km² including the salt pan was declared by an Act of the parliament of the Republic of South Africa in 1967.

There are many ways to visit Etosha. Probably the most common is via guided safari tours. Namibia depends heavily on tourism for its prosperity and there is a steady stream of safari busses heading towards Etosha from the capital, Windhoek, about 450 km to the south. Towns like Outjo on the southern side of the park thrive on tourist revenues and in return provide a mainly European clientele with unforgettable experiences. Groups of visitors are taken in safari busses to the various areas where wildlife are abundant and provided with opportunities to view and photograph to their hearts content.

However, many visitors choose to tour the park independently in their own or rented vehicles. Good paved roads lead to several park gates, and well-maintained gravel roads provide easy and safe access to wildlife, particularly around the southern side of the pan between Okaukuejo and Namutoni. Once inside the park, drivers are not permitted to leave their vehicles except in designated areas. Probably the biggest drawback to driving yourself in Etosha is the need to keep your eyes on the road rather than on the fascinating sights all around you.

Accommodation is seldom a problem at Etosha. There are several high-quality lodges



Figure 2 A safari bus at Okeukeujo



Figure 3 A herd of black-faced impala cross the road near the salt pan.



Figure 4 The Etosha Pan is usually dry but during rainy seasons, sometimes fills to a depth of several centimetres

Geo-Travels (con't)

within the park that are run by the national parks service, with excellent accommodation and access to nearby waterholes where animals congregate. Each lodge has its own ambience and particular wildlife inhabitants and many visitors spend three or four days in the park, staying in a different lodge each night. In addition, there are many privately-owned lodges and camps near to but outside the park which are generally more economical than the park lodges and provide easy day access to all the sights.



Figure 5 Giraffes are a common site beside the roads everywhere in Etosha



Figure 6 Zebras are abundant throughout Etosha and fill the wide plains around the pan in their thousands



Figure 7 There is a wide variety of African antelopes in the park. Among the largest and most beautiful are the Oryx.



Figure 8 The fortress at Namutoni was built by the Germans in the early part of the 20th century. It supported enforcement operations to prevent the spread of mad cow disease and military operations against local insurgents. In 1950, Fort Namutoni was declared a national monument and is now a centre for tourist lodging, dining and wildlife viewing.



Figure 9 Careful driving is necessary at all times on Etosha roads. African elephants always have the right of way.

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**Geoscientists Nova Scotia and the
Nova Scotia Department of Natural Resources
Professional Development Workshop**

Wednesday, September 2nd, 2015, 9:00 am

Free admission; attendees should rsvp Fred Bonner at fred@eduterra.ca

**Social Licensing and Community Engagement:
a Professional Development Workshop**

This workshop is designed for professionals in, or associated with, resource development industries. It builds on previous workshops, conferences and government initiatives on community engagement.

Topics:

Part 1: Introduction

- Social license to operate
- Perspectives on social license
- Responsibilities and rights

Part 2: Community Engagement in the Minerals Sector

- Mineral development activities
- Community engagement principles
- Community engagement possibilities

Part 3: Community Engagement Practice

- Understanding impacts – a community perspective
- Matching engagement and mineral development activity

Part 4: Community Engagement Exercise

The workshop is being presented by Geoscientists Nova Scotia (APGNS) as part of the Continuing Professional Development and Competency Assurance Program and is funded by the Nova Scotia Department of Natural Resources (NSDNR) through the Nova Scotia Mineral Incentive Program (NSMIP).

APGNS Publication Policy – APGNS encourages the submission of articles and editorials for publication in the **GeoGazette** on topics related to the science and profession of geoscience.

Submittals shall be of interest to the members of APGNS, and others interested in earth science. Articles and editorials may be noted as follows at the discretion of the editor:

“The opinions, positions and conclusions presented herein are those of the author and do not necessarily reflect the opinions, positions or conclusions of APGNS.”

All materials submitted for publication, including author opinions contained therein, shall include accurate and appropriate references. The Editor has the authority to solicit, edit, accept, or reject articles and editorials and other written material for publication. The APGNS Editorial Board has the authority, if it chooses to act on any particular case, to support or overrule actions of the Editor regarding the solicitation, editing, acceptance, or rejection of any particular article, editorial, or other written material for publication.

The **GeoGazette** is a publication of Geoscientists Nova Scotia. Members are welcome and encouraged to submit editorials, letters to the editor and articles of interest, including photographs, for publication.

Opinions and views independently expressed in this publication do not necessarily reflect those of Geoscientists Nova Scotia, the Council, Boards, Committees, and/or Staff. Subscriptions to the **GeoGazette** are provided electronically to all registrants (members, licensees and members-in-training, and student members) in good standing, and are included in the annual registration fees.

The **GeoGazette** will be distributed electronically and posted on the Association website (www.geoscientistsns.ca).

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