#### **MacDougal, Raymond Papers**

#### Raymond MacDougal Papers, gift of Suzanne MacDougal

**Dates:** 1936-2003 (primarily, 1939-1945)

Extent: 4 boxes (.8 metres)

#### **Biography:**

Joseph Raymond MacDougal (known as Raymond throughout his life) was born in Toronto on 5 May 1917 to Paul MacDougal (1883-1958) and Marie Ellen Swan (1995-1961). MacDougal was a keen photographer and captured his British and European biking excursion in 1936. In 1940, after the outbreak of war, MacDougal joined the Royal Canadian Air Force (RCAF), he hoped to be accepted as a photographer, but was instead assigned to be an observer. He trained in Toronto, before being sent to Clinton, Ontario, the site of a secret radar base, where he assisted with construction and set-up. In the summer of 1941, he attended the Initial Training School (ITS) at Belleville, before being sent to Ancienne Lorette in Quebec for flight training as a navigator. After 64 hours of flight hours, McDougal was transferred due to extreme air-sickness. He was assigned to the Clinical Investigation Unit and was sent to Toronto, where he trained in blood grouping and transfusion and was then transferred to Halifax and, later, to Regina to do blood labs for soldiers going overseas and also assisted with experiments on floatation devices, ditching suits and oxygen regulation. In October 1943, he returned to the secret No. 1 Clinical Investigation Unit located at 1107 Avenue Road in Toronto. MacDougal took over the photographic and joined the motion picture staff, where he worked on educational films for the RAF and RCAF and worked on aerial photography advancements. MacDougal also photographed activities at No. 1 Clinical Investigation Unit including experiments on centrifugal force on pilots at the Banting laboratory.

Raymond MacDougal married Eleanor Campbell on 18 October 1941 and had four children. After the war, he attended medical school at the University of Toronto and graduated in June 1953. Between 1954 and 1957, he worked as the Chief Medical officer for the Food and Drug Directorate in Ottawa, after which he relocated to Montreal to become the medical director of the pharmaceutical company, Frank W. Horner. He later became the Medical Director of Burroughs Wellcome & Co. After he retired, he worked as a consultant for the Terry Fox Foundation organizing studies for the drug Interferon. In 2002, he was awarded the Queen's Golden Jubilee medal.

Raymond MacDougal died on 20 November 2004 in Kingston, Ontario at the age of 87.

#### MacDougal, Raymond Papers

#### **Scope and Content:**

This collection contains photographs and a typewritten manuscript recording Raymond MacDougal's wartime experience while serving with the RCAF in Canada. This includes a written description of his war work including posted locations, individuals he worked with, and projects he was involved in. MacDougal's annotated photographs are included in his typewritten manuscript, *The War Years 1939-1945*, as well as in a separate album. The album, which had the pages removed for conservation purposes, largely details photographs taken for both personal interest and as a part of his role in the photographic and motion picture section for the Clinical Investigation Unit in Halifax and Regina, and at the No. 1 Clinical Investigation Unit in Toronto, a top-secret medical facility, which MacDougal often describes as No. 1 I.T.S. These photographs notably include various experiments including centrifugal force, oxygen regulators and decompression chambers. MacDougal's collection also contains photographs of Canadian WWII aircrafts on the runway and in flight, as well as extensive aerial photographs of Toronto, which were captured during the process of making educational films and testing photographic cameras in aircrafts. There are also several photographs from the Victory Aircraft factory in Malton, Ontario including celebrations in November 1944 for the 100<sup>th</sup> Canadian-built Lancaster aircraft. The collection also contains memorials of friends who died in action during the war. This collection also includes a typescript bound manuscript and photographs of MacDougal's biking trip across Britain and Europe with his friend, William Dalton Smith, in 1936.

#### **Arrangement:**

#### Contains Series:

- Series 1: Photographs
- Series 2: Manuscripts and Flight Log

**Notes:** Photographs were removed from album for conservation purposes. Original order was maintained. MacDougal's two manuscripts and flight log are on deposit with the library and are still owned by Suzanne MacDougal.

BOX: FOLDER	CONTENTS		DATE(S)
	Work with No. 1 Clinical Investigation Unit and Photographs of WWII aircrafts (photographs pasted on paper and originally held in an album)		
Box 1 Folder 1	Regimental photograph of the No.1 Clinical Investigation Unit	Taken in front of the Unit's Headquarters at 1107 Avenue Road, Toronto.	25 May 1945
1:2	<ol> <li>[Handley Page Halifax bomber in flight]</li> <li>Regimental photograph of the No.1 Clinical Investigation Unit</li> </ol>		[1940-1945] 25 May 1945
1:3	<ol> <li>[Avro Anson siting on the runway]</li> <li>[Celebration at the Victory Aircraft factory in Malton]</li> </ol>	1. Possibly taken in Dorval 2. Individual in the crowd noted with ink. Most likely from the celebration for the 100 <sup>th</sup> Lancaster built at the factory, with the only Canadian-built York on display	[1940-1945] [November 1944]
1:4	<ol> <li>[Workers of the Victory Aircraft factory in Malton posing with [the 100<sup>th</sup> Lancaster built]]</li> <li>[Three men posing in front of a plane]</li> </ol>	2. Men identified in a later photograph as Russ DeTro, Mark Nisely and Max Matas	[November 1944] [1944-1945]
1:5	<ol> <li>[Man posing in front of the only Canadian-built Avro York]</li> <li>[Avro Lancaster]</li> </ol>	Both photographs are most likely taken at the Victory Aircraft factory in Malton, where they were built.	[1944]
1:6	<ol> <li>[Posed photograph of two men and two women in RCAF uniforms]</li> <li>[Posed photograph of two men and two women in RCAF uniforms]</li> </ol>	<ol> <li>Men identified as Harry Elsie and Jack Moir</li> <li>Both photographs likely taken in the photography lab at the No. 1 Clinical Investigation Unit in Toronto</li> </ol>	[1944-1945]
1:7	1.a. [B-24 Liberator in flight] 1.b. [DC3 (Dakota) and Avro Lancasters on the runway]	All three photographs likely taken at the airport in Dorval	[1940-1945]

	2. [DH Mosquito and Avro Lancaster on the runway]		
1:8	1.a Control Tower, Dorval 1.b. Liberator and Dakota [on runway] 2.a. Liberator, for 2.b. Liberator, aft	All photographs likely taken at the airport in Dorval.	[1940-1945]
1:9	1.a/b Charlie Platt in Lib[erator] cockpit 2.a Mosquitoe and Lancaster [on runway] 2.b. Commandos [on runway]	All photographs likely taken at the airport in Dorval.	[1940-1945]
1:10	1.a [Man in cockpit] 1.b Our Lib in Hanger 2.a. Hudson and Dakota [on runway] 2.b. Dakota [on runway]	1.a Man later identified as Claude Bleeks All photographs likely taken at the airport in Dorval.	[1940-1945]
1:11	1.a [Photograph of a man in a flight jacket] 1.b/c [Posed photographs of men having a break] 2. [Six men in uniform posed by snow]	1.a Man later identified as Russ deTro 1.b Russ deTro on far right.	[1940-1945]
1:12	1.a Claude Bleeks on a Lib wing at Dorval [with a camera] 1.b F/L Ward Smith 2.a/b Claude in the Lib Pilot's Pos'n	All photographs likely taken at the airport in Dorval.	[1940-1945]
1:13	Intercom display     Oxygen Mask Development	<ol> <li>Didactic panel of intercom efficiency</li> <li>Didactic panel on required fabric characteristics for aircrew, marine crew and ground crew clothing. Didactic panel on oxygen requirements at different altitudes and oxygen mask fitting.</li> <li>Both photographs likely taken at the C.M.A Show, Royal York, 1944</li> </ol>	[1944]

1:14	<ol> <li>Airforce clothing</li> <li>Emergency Equipment</li> </ol>	<ol> <li>Display on blood testing and labeled display of "What the well-dressed airman is wearing" including cold weather gear.</li> <li>Display of live saving equipment including dinghies and exposure suits.</li> <li>Both photographs likely taken at the C.M.A Show, Royal York, 1944</li> </ol>	[1944]
1:15	<ol> <li>Medical Facts and Figures</li> <li>Model of a [Lysander]</li> </ol>	Didactic panel on medical statistics in the RCAF including accidents, injuries, V.D and reasons for hospitalizations, discharges and repatriations     Was originally labeled a Dakota and crossed out.  Both photographs likely taken at the C.M.A Show, Royal York, 1944	[1944]
1:16	<ol> <li>Penicllin Display</li> <li>Penicllin Display</li> </ol>	<ol> <li>Display for "Penicillin Joint Service         Committee. R.C.N, Army, R.C.A.F."         Includes unit to produce penicillin and dosage information.</li> <li>Display on the bacteriological growth of penicillin         Both photographs likely taken at the C.M.A Show, Royal York, 1944</li> </ol>	[1944]
1:17	<ol> <li>Stretchers in a Dakota.</li> <li>Air Ambulance Equipment</li> </ol>	<ol> <li>Display of a "section of Dakota aircraft showing strap stretcher bearing equipment. Capacity 24 patients."</li> <li>Display of equipment used for medical uses on airplanes.</li> <li>Both photographs likely taken at the C.M.A Show, Royal York, 1944</li> </ol>	[1944]
1:18	Air Ambulance Equipment	Display showing "Air Transport of Patients" with Airplane model	[1944]

	2. Blackout Exhibit, C.M.A Show. Royal York, 1944	2. Didactic panel of "physiology of centrifugal force."	
1:19	<ol> <li>Loud Speakers</li> <li>Group photograph of five men in RCAF uniforms</li> </ol>	2. Men identified as Fred Forbes, Bob Harris, Al Ward, Russ Waters and Russ DeTro	[1940-1945]
1:20	<ol> <li>Testing Equipment</li> <li>Recording Machines</li> </ol>	Equipment likely used to test microphones and headphones with flight helmets and oxygen masks at the No. 1 Clinical Investigation Unit in Toronto	[1942-1945]
1:21	<ol> <li>Testing microphones</li> <li>Sound control apparatus</li> </ol>	Shows two men in uniform conducting testing on microphones and earphones.  Equipment likely used to test microphones and headphones with flight helmets and oxygen masks at the No. 1 Clinical Investigation Unit in Toronto	[1942-1945]
1:22	<ol> <li>Group photograph of Subcommittee on Oxygen Meeting</li> <li>[Photograph of roll poster of the Sergeants' Mess. No. 2 I.T.S, Regina, July 1943"</li> </ol>	<ol> <li>Bill Franks and Ken Ferguson identified in a separate hand</li> <li>Includes photographs and names of everyone</li> </ol>	1943
1:23	<ol> <li>Arial photograph of the Houses of Parliament, Ottawa</li> <li>Arial photograph of Rockcliffe, 1944</li> </ol>		1944
1:24	<ol> <li>Al Ward and Joe Hindson</li> <li>The cold-test group, prior to going to Prince Albert, 1944</li> </ol>	<ol> <li>Photograph taken in a cockpit with Al Ward as navigator and Joe Hindson as pilot.</li> <li>Large group photograph</li> </ol>	[1942-1945] 1944
1:25	<ol> <li>Ditching suit testing group, Halifax</li> <li>[Ditching suit testing group, Halifax]</li> </ol>	Both photographs show a large group posing on the deck of a ship at sea with an emergency dinghy	[1942-1945]
1:26	<ol> <li>[Photograph of printed poem, "High Flight" by John Gillespie Magee, Jr.]</li> <li>A.D Ward</li> </ol>	<ol> <li>Magee was killed in action on 11 December 1941.</li> <li>Ward wears a parachute harness and poses in the cockpit of a plane</li> </ol>	[1942-1945]

1:27	<ol> <li>[Photograph of regimental crest for RCAF No.1 I.T.S]</li> <li>[Photograph of a technical drawing of a Hawker Hurricane MK.I Single-Seat Fighter]</li> </ol>	RCAF No. 1 I.T.S shared a headquarters with the No.1 Clinical Investigation Unit at 1107 Avenue Rd, Toronto	[1942-1945]
1:28	<ol> <li>F/L Archer in soundproof intercom room</li> <li>Intercom subjects testing ear phones</li> </ol>	Both photographs show studies conducted by the No. 1 Clinical Investigation Unit in Toronto	[1942-1945]
1:29	<ol> <li>Testing Ditching Suits in Bedford Basin</li> <li>How to turn a rubber dinghy right side up</li> </ol>	Both photographs likely apart of the ditching suit testing group in Halifax	[1942-1945]
1:30	1.a Joe Hindson, Jim, Nelson, Al Ward 1.b. Al Ward, Russ DeTro, Freddie Forbes, Bill Laurie 2.a C3B Oxygen regulator 2b. C3A Oxygen regulator	1.a Photograph taken in a flying airplane 1.b Showing four men in lab coats and jumpsuits taking a break.	[1942-1945]
1:31	<ol> <li>The accelerator</li> <li>Bill Laurie in the accelerator gondola</li> </ol>	Both photographs show the human centrifuge machine used to study centrifugal force on pilots at the Banting laboratory at the No. 1 Clinical Investigation Unit in Toronto	[1942-1945]
1:32	<ol> <li>Ditto. Note x-ray machine mounted on front of car.</li> <li>[Bill Laurie in the accelerator]</li> </ol>	Both photographs show the human centrifuge machine used to study centrifugal force on pilots at the Banting laboratory at the No. 1 Clinical Investigation Unit in Toronto	[1942-1945]
1:33	1.a. #1 I.T.S Flag raising ceremony 1.b C.O's Parade 2.a Air-Ambulance oxygen set-up 2.b Air ambulance Oxygen set up and casualty bag	1. Both photographs show the grounds of     1107 Avenue road, Toronto     2. Show test photographs of a man wrapped in a blanket and the casualty bag on oxygen	[1942-1945]
1:34	1.a.b Mark Nisely and both ends of his Whimpy Wellington 2.a.b Freddie Forbes in accelerator car 2.c F/O Don Milne	1. Nisely posing in the cockpit and by the tail of a Vickers Wellington 2.a.b Show the human centrifuge machine used to study centrifugal force on pilots at the Banting	[1942-1945]

1:35	1.a Bolingbrooke Line-up at G.R.D 1.b Claude Bleeks, Eleanor White and Ray, at Banting	laboratory at the No. 1 Clinical Investigation Unit in Toronto. A sign next to Forbes reads, "G for 5 sec. No. F.F.S"  2.c Milne is photographed inside of an airplane.  2.a.b Raymond and Claude Beeks at work in	[1942-1945]
	2.a, b. At work in our Banting studio	the film studio at No. 1 Clinical Investigation Unit in Toronto	
1:36	1.a.b Making Tricky movie titles 2.a.b Gremlins on display in Regina	1.a.b Raymond and Claude Beeks at work in a film studio at No. 1 Clinical Investigation Unit in Toronto 2.a.b Comical figurines used in recruiting efforts for the RCAF	[1942-1945]
1:37	1.a. ["The Gremlins are Here" display in Regina] 1.b DeTro, Nisely and Max Matas standing with a plane in uniform. 2.a. Testing emergency equipment in the swimming pool 2.b Testing cold clothing	2.a Men in uniforms and lifejackets floating in an emergency dinghy	[1942-1945]
1:38	1.a One of the 12 Decompression chambers at Halifax 1.b Interior of chamber 2.a Men in position in chamber 2.b Chamber operator's control board	1.a.b Photographs are numbered and dated and may not have been taken by Raymond, or were taken for official purposes  2.a Shows men wearing oxygen masks sitting in the chamber. Men identified as Mackenzie, Cochrane and Steffler.	9 October 1942 1 February 1943
1:39	1.a Aerial scenery 1.b Jim Nelson, Ward Smith, Al Ward 1.c When you can see through the clouds 2.a Grumman Goose Landing 2.b. A part of Rockcliffe	1.a photograph taken from a plane 1.b Shows three men flying 1.c Photograph taken from a plane 2.a Likely taken at Rockcliffe airport	[1942-1945]

	2.c DeTro waiting for action	2.c Likely taken at Rockcliffe airport	
1:40	1.a Ray watching the clouds go by 1.b Sunnyside and exhibition waterfront 1.c DeTro on the ground 2.a The Chateau Laurier, early morning from our room below 2.b Our room had 4 beds and 19 lights 2.c [Aerial photograph]	1.a photograph taken from a plane 1.b. Aerial photograph taken from a plane in Toronto	[1942-1945]
1:41	<ul><li>1.a Above the clouds</li><li>1.b And on the ground</li><li>1.c Spit panel</li></ul>	1.a.b Spitfire in flight and on the runway.	[1942-1945]
	<ul><li>2.a Following us</li><li>2.b Anson V</li><li>2.c [Anson and Spitfire on the ground]</li></ul>	2.a.b Spitfire and Anson in flight	
1:42	1.a Over the clouds 1.b P.R.U Spit again 2. W/C Russell M.C		[1942-1945]
1:43	1.a Ray and F/O Sproule 1.b F/O Milne 1.c Jack Moir 2.a.b.c Trenton	2. Aerial photographs taken in Trenton	[1942-1945]
1:44	1.a Nose of our P.R.U Spitfire MK VII 1.b DeTro in Position 2.a.b Copies of pamphlets dropped over North Africa during the American invasion 1942	1.a PRU stood for photo reconnaissance unit     2.Pamphlet written in French and Arabic	[1942-1945]
1:45	1.a [Spitfire in flight] 1.b Al Ward in Spit VII 2.a Canso + Spit 2.b Dashboard of our Anson V	1.b Shows Al Ward in cockpit while in the air	[1942-1945]

1:46	1.a DeTro and MK VII Spitfire. Rockcliffe, 1944 1.b F/L Ward Smith + Det 2.a Our P.R Spit 2.b Coming up to meet us	1.a.b Shows pilots getting into spitfires on the runway in Rockcliffe near Ottawa 2. Spitfire in flight	[1944]
1:47	<ol> <li>[Photograph in a workshop]</li> <li>[Aerial photograph of four North American Yale aircraft]</li> </ol>	1.a Possibly taken at No. 1 I.T.S	[1942-1945]
1:48	<ol> <li>At work on pressure breathing film</li> <li>In between shots: Ray + Russel DeTro</li> </ol>	Shows Russel DeTro in chamber	[1942-1945]
1:49	1.DeTro being taken 2. Doug Dingwall, DeTro, Jack Moir	<ol> <li>Shows Russel DeTro during pressure breathing film</li> <li>Individuals inside the chamber for filming</li> </ol>	[1942-1945]
	Aerial Photographs of Toronto		
1:50	1.a Parking line-up at Trenton 1.b Western Gap 1.c Downtown Toronto 2.a The Royal York 2.b Canada Life Bldg 2.c Royal York again	All photographs except 1.a are aerial photographs taken in Toronto	[1942-1945]
1:51	1.a City hall in the centre 1.b Bank of Commerce 1.c East end of harbour 2.a Western gap 2.b.c Coal piles + oil tanks	All photographs are aerial photographs taken of downtown and east Toronto	[1942-1945]
1:52	1.a Part of the docks 1.b The Eastern Gap 1.c Scarborough Bluffs 2.a.b.c Views of airport	All photographs are aerial photographs taken in Scarborough, east Toronto and the waterfront	[1942-1945]
1:53	1.a.b.c [Aerial photographs] 2. a The Bluffs	1.a.b.c Location unknown	[1942-1945]

	2.b [Aerial photograph] 2.c Eastern Turning Basing	2.a.b.c Photographs taken in Scarborough and Eastern Toronto	
1:54	1.a Island airport, our home base 1.b The passing clouds 2.a A canso, or PBX 2.b Fortress, Liberator	1. a.b Aerial photographs taken in Toronto 2.a.b Shows aircraft on runway	[1942-1945]
1:55	1.a.b #1 I.T.S and surroundings 2.a.b [#1 I.T.S and surroundings]	All photographs are aerial photographs taken in the area around avenue road, Toronto	[1942-1945]
1:56	1.a Toronto from the Lake 1.b East Toronto 2.a No. 1 I.T.S 2.b Woodbine racetrack	All photographs are aerial photographs taken around avenue road, East Toronto and the waterfront	[1942-1945]
1:57	1.a.b Coal piles and oil tanks, east end of bay 2.a.b Toronto East	All photographs are aerial photographs taken in East Toronto	[1942-1945]
1:58	1.a Toronto from the west 1.b Hanlon's point and airport 2.a Island airport 2.b East of the Don	All photographs are aerial photographs taken in East Toronto and the waterfront	[1942-1945]
1:59	1.a Bloor St. E 1.b Ditto 2.a Yonge + St. Clair Reservoir 2.b Leaside, looking south	All photographs are aerial photographs taken in East Toronto and north of downtown	[1942-1945]
1:60	1.a South from Rosedale Golf Course 1.b Filtration Plant East Toronto 2.a Dufferin Airstrip 2.b Scarboro	All photographs are aerial photographs taken north of Downtown, East Toronto, West Toronto and Scarborough	[1942-1945]
1:61	1.a East Toronto 1.b End of the Don 2.a.b [East Toronto]	All photographs are aerial photographs taken in East Toronto	[1942-1945]
1:62	1.a From the N.E end of City 1.b Cherry St.	All photographs are aerial photographs taken in North Toronto, the waterfront and East Toronto	[1942-1945]

	Large Mounted Photographs (OVS)		
1:67-68	Negatives of WWII aircrafts and Canadian Pacific commercial aircrafts	15 negatives	[1939-1945?]
	Negatives		
	MacDougall	<i>G</i> · · · ·	
	2. Microfilmed letter from Harold O'Brien to Ray	Longworth	
	1.c A.A O'Brien & Harold	2. With typed material on the death of Harold	
1.00	1.b Harold & Spitfire		1744
1:66	1.a A.A. O'Brien & ?		1942
	2.b Harold Longworth 2.c Harold & A.A. O'Brien		
	2.a Harold Longworth, Len Lucas. 29/4/1941		
	Hall		
	Alexander Alan O'Brien, Francis William		
	McCleery, Frederick Hugh Purchase,		
	Joseph Yves Laflamme, Raymond Norman	man is included alongside the clippings	
1:65	1. Clippings on the Douglas William Warwick,	1. Additional typed material on the death of each	1941-1945
	Memorials and Chippings		
	Memorials and Clippings		
1:64	<ol> <li>Edward VII, George V, George VI</li> <li>[Aerial photograph of No. 1 I.T.S]</li> </ol>	1.a Not a photograph taken by MacDougal	[1942-1945]
1 (1	2.b [East Toronto]	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F1040 10451
	2.a St. Johns Norway		
	1.b East Side	the waterfront and in East Toronto	
1:63	1.a C.N Exhibition Waterfront	All photographs are aerial photographs taken along	[1942-1945]
	2.b East end of Bay		
	<ul><li>2.a Ferry + steamer docks</li><li>2.b East end of Bay</li></ul>		

Box 2 OVS Folder 1	The Mitchell	1944
2:2	Ottawa (aerial photograph of Parliament)	1944
2:3	The Hudson	1944
2:4	[Aerial photograph]	1944
2:5	U.S Dive Bomber (2 copies)	1944
2:6	"Ja so few" [photograph of pilot in cockpit]	1944
2:7	Electra	1944
2:8	Spitfire	1944
2:9	"The Goose"	1944
2:10	Dive Bomber	1944

SERIES 2:	SERIES 2: MANUSCRIPTS AND FLIGHT LOG		
BOX: FOLDER	CONTENTS	DATE(S)	

Box 3	Typescript manuscript, Babes on Bicycles or Did	Records biking tour through Europe with friend,	1936
Item 1	Europe Fall – or was she pushed? By Raymond	William Dalton Smith. Includes extensive hand-	
	MacDougal	annotated photographs	
Box 4	Typescript manuscript, The War Years, 1939-1945	Describes war work as an observer including	1939-1945
Item 1		training, setting up the secret radar base at Clinton,	
		and activities with the No. 1 Clinical Investigation	
		Unit in Toronto. Includes extensive hand-annotated	
		photographs.	
Box 4	Raymond MacDougal's RCAF Flying logbook	Contains a record of all flights between 1941 and	1941-2003
Item 2		1945, as well as all flights made as a passenger on	
		commercial flights between 1955 and 2003	