Appendix
Development of performance

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For the competitive oarsman, results obtained in an international regatta and, notably, in the Fédération Internationale des Sociétés d'Aviron (FISA) regatta of the year, represent the state of the art. Many sports disciplines are described by national, world and Olympic records, but for rowing, such defined performance characteristics can not be provided. The obvious reason is that for any given regatta, the recorded race time is influenced not only by the ability of the crew to row but also by the weather conditions. A head wind results in a much slower speed relative to the shore than a tailwind, and a side wind also challenges the balance of the boat to make the race slower than would be the case under neutral weather conditions.

Despite the various wind circumstances under which a regatta is held, it is clear that results in rowing improve with the passage of time. This can be seen when the results are compared for the same race that has been held over many years, for example, the men's eight event at the Royal Henley Regatta (Fig. 1.6). The improvement is also visible in the results of the FISA regatta held on a new venue each year as presented in the tables and figures of this appendix. With the marked influence of wind on the results, the improvement of rowing results is illustrated most clearly for those events that have been represented in every regatta since the first European championship in 1893 (single scull, coxed four, and the eight; Tables A.1, 4, and 8). Conversely, the increase in the distance for women from 1000 to 2000 m, and the late introduction of some of the lightweight events, makes the database comparatively small and the calculated regression lines are dominated by the prevalent weather conditions.

Considering that the prevailing weather changes at random, the regression line for each rowing event represents the time a typical race would be expected to last. Furthermore, the intercept of the regression line for 2007 may be taken to represent the expected time for the race in the upcoming FISA regatta under the premise that weather does not dominate the result. Therefore, the calculated time for 2007 may be compared to the World records on a rowing ergometer (Table 1.3). This is the case not only for the single scull, but also for pairs, fours and the eight with the introduction of ergometers connected to each other and working together on slides.

The basis for the plot of results obtained in the FISA regatta presented in the figures of this chapter is that they represent the same lengths of the course. Thus, the 3000 m race of the first European championship is not taken into consideration. Also, as indicated in the tables, those results obtained on rivers with an assumed significant current, have been disregarded in the calculations of the regression lines. Yet, there remains hidden bias. For the first 75 years (approximately) of the FISA regatta, the course was defined as 2000 m. That meant that the long eight-oared boat had to row the shortest distance. With the 2000 m now measured from the stern at the starting line to the finish line, the "true" improvement of the results is some 3 s more impressive than indicated by the figures.

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Overall, the improvement of the results is by about one second per year (Table 1.5) and many factors can be considered to contribute to that improvement. When looking at the boats used for the early FISA regattas, they appear remarkably similar to those used today. Yet, it is not difficult to see differences in all parts of the construction. The riggers are now much more stable, the distance travelled by the seat is longer and often "going through the pin" and, accordingly, the style of rowing has changed to include more power with the legs and less "swing" of the body. Not only does the modern rowing style allow for the development of greater power, but it also decreases the up and down movement of the body's center of gravity and, thereby, makes the boat move more smoothly through the water. In the pairs and fours, the coxswain has been moved to the front of the boat and he now lies down rather than sits up, again making the movement of the boat more stable. Further improvement is in the shape of the oar (Fig. 1.16). The blade of the early oar and sculls was very narrow indeed and the shape has changed to become more rounded as exemplified by the Macon type blade that, in turn, has been replaced by the now dominant "big blade". Obviously, the boat has changed from being made of wood to a plastic or carbon fibre construction and, similarly, the oars are of carbon fibre rather than of wood. Accordingly, it is now possible to standardize the boats and the current weight limits for the boats are presented in Table 1.2. Also, the boats are standardized in the sense that the sliding rigger system (Fig. 1.15) winning the World single scull championship for Peter Kolbe in 1981 and 1982 (Table A.4) is no longer permitted.

As mentioned, early regattas took place on very different venues and at one time over a different distance but, gradually, the rowing course has become a dedicated stadium. The first such rowing stadium was the Bosbaan in Amsterdam constructed for the Olympic Games in 1928. Similarly, the Xochimilco venue in Mexico City, the course in Munich, and many more courses have been constructed for their respective Olympic games. But standardization of the race course goes beyond the construction of the course, including ~30° banks in order to attenuate a rebound of waves created not only by the wind but also by the racing boats, themselves, and, more significantly, by the motor boats used by the umpires and the rescue team following each race. Also, the buoy system separating each lane has been standardized so as to make it difficult for the blade of the oar to get caught up as was the case for the "hard luck" Danish coxless four during the finals of the European championships at the Bosbaan 1964.

With all these technical improvements, the figures of this chapter, including the 95% confidence interval for the regression lines (dots), illustrate that there is much more stability in the results of the FISA regatta than was the case in the early years. It may be speculated whether the technical changes give room to detect a contribution by the oarsmen to the ever improving results obtained. There is every reason to believe that a substantial part of the improvement of results are strongly related to an enhanced selection and training of the rowers. Results improve with the size of the oarsmen and, in general, due to enhanced nutrition, the height of the population has increased by one centimetre per decade, at least until recently. So, even among a non-selected group of young people, therefore, the team might be expected to become gradually larger over the 100 years or more that the FISA regatta has taken place. Considering that the rowing team has always been made up of rather large individuals (Chapter 3), it has become easier to find extremely tall and muscular rowers. The size of the winning teams has definitely increased over the years. For the women's events, there has been a reduced emphasis on the selection of large individuals. For the 1000 m race, the influence of body mass on the result is even more significant than for the current 2000 m race. Thus it may be that the progression of the height and weight of women rowers winning international championships has declined somewhat.

The possibility to train has also improved considerably as society in many countries has become richer. In the early years, rowing was dominated by people who had to work or study and rowing, even on an international level, was a leisure time pursuit. This is in contrast to the more or less professional life that many international oarsmen now live and the national team is surrounded by educated coaches together with physiologists, physiothera-

pists, medical doctors, and professional managers. It would be meaningless to arrange a professional championship as was established early in the 19th century (Fig. 1.14), or the FISA regatta may be considered to represent a professional championship. Accordingly, the FISA championship is now won by teams in their late twenties while, previously, it was an exception to find a competitive oarsman older that 30 years of age and "Nations Cup" for rowers under 23 years may be considered the present regatta that simulates the amateur championship. Yet, even these young rowers may come out of schools where competitive rowing is part of the program.

Not only is much more time spent rowing than just a generation ago, but bad weather conditions are compensated for by training camps over long periods under favorable weather conditions. Furthermore, outside such training camps, the widespread use of rowing ergometers allows for year-round rowing to an extent that was not possible with the use of indoor rowing tanks (Fig. 1.18).

With much more time spent rowing and comparatively less time spent on, e.g. gymnastics, weightlifting, circuit training, and running different distances, the technique of rowing has improved. This is reflected in a lower oxygen uptake at a given rowing speed for teams training over long distances compared to those training at a high intensity over a relatively short distance. This was inspired, at least to some extent, by the German coach Karl Adam (Fig. 1.20).

It may be considered that, with the standardization of the rowing course and the weight of the boats and, furthermore, with the stability of the size of the population in many countries, further improvements in rowing results will depend on the individual rower. Accordingly, the result from the eight event at the Royal Henley regatta indicates that further improvement of results will be slow (Fig. 1.6). With internationally competitive rowing representing something similar to a normal job, there is a limit to how much more can be gained by training. Improved results will depend on enhanced quality of training and/or the appearance of rowers with extraordinary talent. Such talent identification is facilitated by the sport of rowing, starting with the five nations forming FISA in 1892 (p. 17), gradually covering the whole world. An increased interest in rowing among children may be important both to identify the talented rower and to learn superb technique.

Recommended reading

Secher, N.H. (1973) Development of results in international rowing championships 1983–1971. *Medicine and Scence in Sports and Exercise* **5**, 195–199.

Secher, N.H. & Vaage, O. (1983) Rowing performance, a mathematical model based on body dimensions as exemplified by body weight. *European Journal of Applied Physiology* **52**, 88–93.

Table A.1 Winning results in men's single scull (M1x).

Year	Event	Place	Winner	Time (min s)	Comment	Year	Event	Place	Winner	Time (min s)	Comment
1893	EC	Orta	BEL		3000 m	1903	EC	Venice	FRA	8 40	
1894	EC	Macon	FRA	7 15		1904	EC	Paris	SUI		
1895	EC	Ostende	BEL	8 10		1904	OG	St Louis	USA	10 08	River
1896	EC	Geneva	SUI			1905	EC	Ghent	ALS	7 51	
1897	RC	Pallanza	BEL	8 55		1906	EC	Pallanza	FRA	8 35	
1898	EC	Torin	BEL	7 30		1906	OG	Athens	FRA	5 53.4	1000 m
1899	EC	Ostende	FRA	8 08		1907	EC	Strasbourg	FRA	8 24	
1900	EC	Paris	FRA	6 09	1700 m	1908	EC	Lucerne	FRA	5 52	River
1900	OG	Paris	FRA	7 35.6	River	1908	OG	Henley	GBR	9 26.0	2414 m
1901	EC	Zürich	FRA	9 56	River	1909	EC	Juvisy	ITA	7 43	
1902	EC	Strasbourg	ITA	8 51.4		1910	EC	Ostend	FRA	7 55	

(*Continued.*)

Table A.1 *Continued.*

Year	Event	Place	Winner	Time (min s)	Comment
1911	EC	Como	ITA	8 14	
1912	EC	Geneva	BEL	8 47.0	
1912	OG	Stockholm	GBR	7 47.6	
1913	EC	Ghent	GER		
1920	EC	Macon	SUI	7 35	
1920	OG	Antwerp	USA	7 35.0	
1921	EC	Amsterdam	NDL	7 16.4	1800 m
1922	EC	Barcelona	SUI	9 06	
1923	EC	Como	SUI	8 02.6	
1924	EC	Zürich	SUI	8 20	
1924	OG	Paris	GBR	7 49.2	
1925	EC	Prague	NDL	6 40.2	River
1926	EC	Lucerne	NDL	7 44.4	
1927	EC	Como	ITA	7 50.0	
1928	OG	Amsterdam	AUS	7 11.0	
1929	EC	Bydgoszcz	NDL	6 32.8	1750 m
1930	EC	Liege	HON	6 26.6	River
1931	EC	Paris	SUR	7 06	
1932	EC	Belgrad	ITA	7 18.2	
1932	OG	Los Angeles	AUS	7 44.4	
1933	EC	Budapest	POG	6 28.4	2300 m
1934	EC	Lucerne	GER	7 38.2	
1935	EC	Berlin	POG	7 54	
1936	OG	Berlin	GER	8 21.5	
1937	EC	Amsterdam	SUI	7 14.4	
1938	EC	Milano	GER	7 40.1	
1947	EC	Lucerne	FRA	7 23.4	
1948	OG	Henley	AUS	7 24.4	River
1949	EC	Amsterdam	USA	7 30.8	
1950	EC	Milano	DEN	7 25.7	
1951	EC	Macon	DEN	7 32.1	
1952	OG	Helsingfors	URS	8 12.8	
1953	EC	Copenhagen	YOU	7 14.6	
1954	EC	Amsterdam	SUI	7 12.4	
1955	EC	Ghent	POG	7 08.3	
1956	EC	Bled	URS	7 24.5	
1956	OG	Melbourne	URS	8 02.5	
1957	EC	Duisburg	AUS	7 02.9	
1958	EC	Poznan	AUS	7 33.6	
1959	EC	Macon	URS	6 58.9	
1960	OG	Rome	URS	7 13.96	
1961	EC	Prague	URS	7 21.61	
1962	WC	Lucerne	URS	7 07.09	
1963	EC	Copenhagen	TCH	7 11.84	
1964	EC	Amsterdam	URS	7 05.19	
1964	OG	Tokyo	URS	8 22.51	
1965	EC	Duisburg	GER	7 42.10	
1966	WC	Bled	USA	7 05.92	
1967	EC	Vichy	RDA	7 59.88	
1967	NAC	St Catharines	DEN	7 41.40	
1968	OG	Mexico	NDL	7 47.80	
1969	EC	Klagenfurt	ARG	7 45.79	
1970	WC	St Catharines	ARG	7 16.54	
1971	EC	Copenhagen	ARG	6 57.99	
1972	OG	Munich	URS	7 10.12	
1973	EC	Moscow	RFA	8 02.77	
1974	WC	Lucerne	RDA	7 20.11	
1975	WC	Nottingham	RFA	7 10.08	
1976	OG	Montreal	FIN	7 29.03	
1977	WC	Amsterdam	RDA	7 12.22	
1978	WC	L. Karapiro	RFA	7 06.01	
1979	WC	Bled	FIN	6 58.27	
1980	OG	Moscow	FIN	7 09.61	
1981	WC	Munich	RFA	7 45.32	Fig.1.15
1982	WC	Lucerne	RDA	7 00.67	Fig.1.15
1983	WC	Duisburg	RFA	6 49.88	
1984	OG	Los Angeles	FIN	7 00.24	
1985	WC	Hazewinkel	FIN	6 48.08	
1986	WC	Nottingham	RFA	6 54.90	
1987	WC	Copenhagen	RDA	7 37.48	
1988	OG	Seoul	RDA	6 49.86	
1990	WC	Tasmania	RUS	7 22.15	
1991	WC	Vienna	GER	6 41.29	
1992	OG	Barcelona	GER	6 51.40	
1993	WC	Racice	CAN	6 59.03	
1994	WC	Indianapolis	GER	6 46.33	
1995	WC	Tampere	SLO	6 52.93	
1996	OG	Atlanta	SUI	6 44.85	
1997	WC	Aiguebelette	USA	6 44.86	
1998	WC	Cologne	NZL	6 39.65	
1999	WC	St Catharines	NZL	6 36.68	
2000	OG	Sydney	NZL	6 48.90	
2001	WC	Lucerne	NOR	6 43.04	
2002	WC	Seville	GER	6 36.33	
2003	WC	Milano	NOR	6 46.15	
2004	OG	Athens	NOR	6 49.30	
2005	WC	Gifu	NZL	7 16.42	
2006	WC	Eton	NZL	6 35.40	

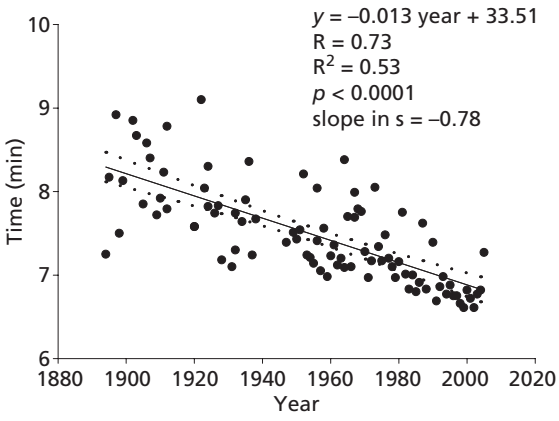

Fig. A.1 Men's single sculls.

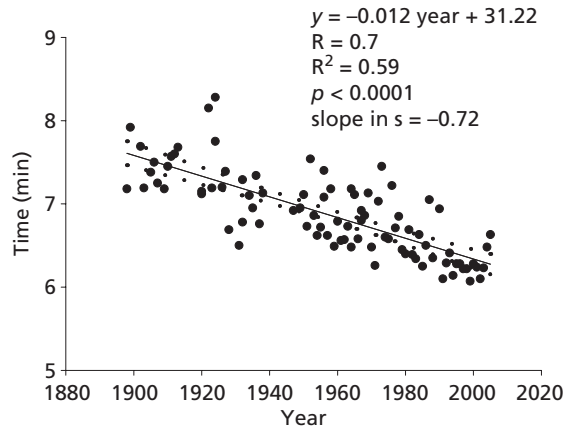

Fig. A.2 Men's double sculls.

Table A.2 Winning results in men's double sculls (M2x).

Year	Event	Place	Winner	Time (min s)	Comment
1898	EC	Torin	FRA	7 11	
1899	EC	Ostende	BEL	7 55	
1900	EC	Paris	FRA	6 13.2	1700 m
1901	EC	Zürich	FRA	9 39	River
1902	EC	Strasbourg	BEL	7 41.6	
1903	EC	Venice	BEL	7 11.2	
1904	EC	Paris	FRA		
1904	OG	St Louis	USA	10 03.2	River
1905	EC	Ghent	BEL	7 23	
1906	EC	Pallanza	BEL	7 30	
1907	EC	Strasbourg	ITA	7 15	
1908	EC	Lucerne	BEL	7 57.6	River
1909	EC	Juvisy	BEL	7 11	
1910	EC	Ostende	FRA	7 27	
1911	EC	Como	ITA	7 34	
1912	EC	Geneva	ITA	7 36	
1913	EC	Ghent	FRA	7 41	
1920	EC	Macon	FRA	7 07.4	
1920	OG	Antwerp	USA	7 09.0	
1921	EC	Amsterdam	NDL	5 49.00	1800 m
1922	EC	Barcelona	SUI	8 09.00	
1923	EC	Como	SUI	7 11.6	
1924	EC	Zürich	SUI	8 17.00	
1924	OG	Paris	USA	7 45	
1925	EC	Prague	SUI	6 10.2	River
1926	EC	Lucerne	SUI	7 11.8	
1927	EC	Como	SUI	7 23.2	
1928	OG	Amsterdam	USA	6 41.4	
1929	EC	Bydgoszcz	SUI	6 11.8	1750 m
1930	EC	Liege	SUI	6 07	River
1931	EC	Paris	SUI	6 30	
1932	EC	Belgrad	HON	6 47	
1932	OG	Los Angeles	USA	7 17.4	
1933	EC	Budapest	FRA	6 20.6	2300 m
1934	EC	Lucerne	SUI	7 06	
1935	EC	Berlin	POG	6 56.7	
1936	OG	Berlin	GBR	7 20.8	
1937	EC	Amsterdam	GER	6 45.3	
1938	EC	Milano	ITA	7 07.5	
1947	EC	Lucerne	NDL	6 55.4	
1948	OG	Henley	GBR	6 51.3	River
1949	EC	Amsterdam	DEN	6 57.2	
1950	EC	Milano	DEN	7 06.5	
1951	EC	Macon	SUI	6 44	
1952	OG	Helsingfors	ARG	7 32.2	
1953	EC	Copenhagen	SUI	6 51.4	
1954	EC	Amsterdam	GER	6 37.2	
1955	EC	Ghent	POG	6 43.1	
1956	EC	Bled	URS	7 05.0	
1956	OG	Melbourne	URS	7 24.0	

(*Continued.*)

Table A.2 *Continued.*

Year	Event	Place	Winner	Time (min s)	Comment
1957	EC	Duisburg	URS	6 37.0	
1958	EC	Poznan	URS	7 10.7	
1959	EC	Macon	URS	6 29.49	
1960	OG	Rome	TCH	6 47.50	
1961	EC	Prague	URS	6 33.61	
1962	WC	Lucerne	FRA	6 33.90	
1963	EC	Copenhagen	TCH	6 43.54	
1964	EC	Amsterdam	URS	6 28.90	
1964	OG	Tokyo	URS	7 10.66	
1965	EC	Duisburg	SUI	7 06.42	
1966	WC	Bled	SUI	6 34.89	
1967	EC	Vichy	SUI	6 47.85	
1967	NAC	St Catharines	SUI	6 55.35	
1968	OG	Mexico	URS	6 51.82	
1969	EC	Klagenfurt	USA	7 07.82	
1970	WC	St Catharines	DEN	6 28.68	
1971	EC	Copenhagen	RDA	6 15.27	
1972	OG	Munich	URS	7 01.77	
1973	WC	Moscow	RDA	7 26.95	
1974	WC	Lucerne	RDA	6 35.95	
1975	WC	Nottingham	NOR	6 31.49	
1976	OG	Montreal	NOR	7 13.20	
1977	WC	Amsterdam	GBR	6 42.83	
1978	WC	L. Karapiro	NOR	6 51.23	
1979	WC	Bled	NOR	6 26.98	
1980	OG	Moscow	RDA	6 24.33	
1981	WC	Munich	RDA	6 41.99	
1982	WC	Lucerne	NOR	6 23.66	
1983	WC	Duisburg	RDA	6 20.17	
1984	OG	Los Angeles	USA	6 37.87	
1985	WC	Hazewinkel	RDA	6 15.49	
1986	WC	Nottingham	ITA	6 30.33	
1987	WC	Copenhagen	BUL	7 03.33	
1988	OG	Seoul	NDL	6 21.13	
1990	WC	Tasmania	AUT	6 56.37	
1991	WC	Vienna	NDL	6 06.14	
1992	OG	Barcelona	AUS	6 17.32	
1993	WC	Racice	FRA	6 24.69	
1994	WC	Indianapolis	NOR	6 08.33	
1995	WC	Tampere	DEN	6 17.01	
1996	OG	Atlanta	ITA	6 16.98	
1997	WC	Aiguebelette	GER	6 13.35	
1998	WC	Cologne	GER	6 13.20	
1999	WC	St Catharines	SLO	6 04.37	
2000	OG	Sydney	SLO	6 16.63	
2001	WC	Lucerne	HUN	6 14.16	
2002	WC	Seville	HUN	6 05.74	
2003	WC	Milano	FRA	6 13.93	
2004	OG	Athens	FRA	6 29.00	
2005	WC	Gifu	SLO	6 37.61	
2006	WC	Eton	FRA	6 07.60	

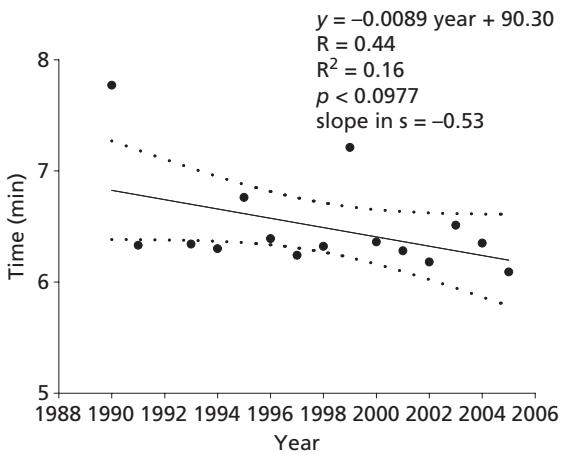

Fig. A.3 Lightweight men's double sculls.

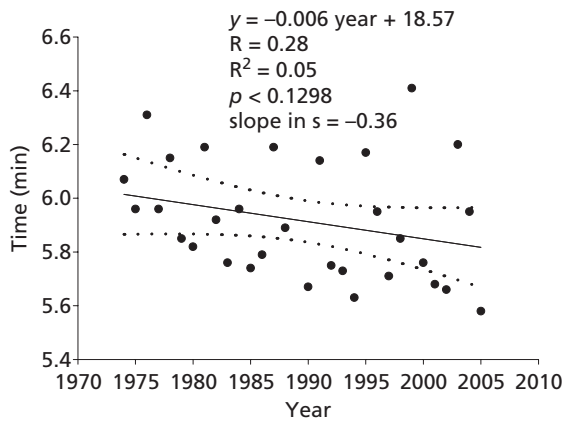

Fig. A.4 Men's quadruple sculls.

Table A.3 Winning results in lightweight double scull (LM2x).

Year	Event	Place	Winner	Time	Year	Event	Place	Winner	Time
1990	WC	Tasmania	USA	7 46.15	1999	WC	St Catharines	ITA	7 12.46
1991	WC	Vienna	GER	6 20.04	2000	OG	Sydney	POL	6 21.75
1993	WC	Racice	AUS	6 20.64	2001	WC	Lucerne	ITA	6 16.75
1994	WC	Indianapolis	ITA	6 18.10	2002	WC	Seville	ITA	6 10.80
1995	WC	Tampere	ITA	6 45.56	2003	WC	Milano	ITA	6 30.60
1996	OG	Atlanta	ITA	6 23.47	2004	OG	Athens	POL	6 20.93
1997	WC	Aiguebelette	POL	6 14.57	2005	WC	Gifu	HUN	6 05.10
1998	WC	Cologne	POL	6 19.11	2006	WC	Eton	DEN	6 11.42

Table A.4 Winning results in men's quadruple sculls (M4x).

Year	Event	Place	Winner	Time (min s)	Year	Event	Place	Winner	Time (min s)
1974	WC	Lucerne	RDA	6 04.01	1991	WC	Vienna	RUS	6 08.39
1975	WC	Nottingham	RDA	5 57.44	1992	OG	Barcelona	GER	5 45.17
1976	OG	Montreal	RDA	6 18.65	1993	WC	Racice	GER	5 43.99
1977	WC	Amsterdam	RDA	5 57.44	1994	WC	Indianapolis	ITA	5 37.68
1978	WC	L. Karapiro	RDA	6 08.94	1995	WC	Tampere	ITA	6 10.09
1979	WC	Bled	RDA	5 50.70	1996	OG	Atlanta	GER	5 56.93
1980	OG	Moscow	RDA	5 49.81	1997	WC	Aiguebelette	ITA	5 42.50
1981	WC	Munich	RDA	6 11.37	1998	WC	Cologne	ITA	5 51.19
1982	WC	Lucerne	RDA	5 55.50	1999	WC	St Catharines	GER	6 24.37
1983	WC	Duisburg	RFA	5 45.97	2000	OG	Sydney	ITA	5 45.56
1984	OG	Los Angeles	RFA	5 57.55	2001	WC	Lucerne	GER	5 40.89
1985	WC	Hazewinkel	CAN	5 44.57	2002	WC	Seville	GER	5 39.57
1986	WC	Nottingham	URS	5 47.41	2003	WC	Milano	GER	6 12.26
1987	WC	Copenhagen	URS	6 11.25	2004	OG	Athens	RUS	5 56.85
1988	OG	Seoul	ITA	5 53.37	2005	WC	Gifu	POL	5 34.96
1990	WC	Tasmania	RUS	5 40.44	2006	WC	Eton	POL	5 38.99

Table A.5 Winning results in men's coxless pair (M2–).

Year	Event	Place	Winner	Time (min s)	Comment	Year	Event	Place	Winner	Time (min s)	Comment
1900	OG	Paris	BEL	7 49.4	River	1926	EC	Lucerne	SUI	7 44.6	
1904	OG	St Louis	USA			1927	EC	Como	ITA	7 54.6	
1908	OG	Henley	GBR	9 41.0	2414 m	1928	OG	Amsterdam	GER	7 06.4	
1920	OG	Antwerp	ITA	7 56		1929	EC	Bydgoszcz	ITA	6 40.2	1750 m
1924	EC	Zürich	SUI	7 41		1930	EC	Liege	POG	6 02	River
1924	OG	Paris	NDL	8 19.4		1931	EC	Paris	NDL	7 01.6	
1925	EC	Prague	SUI	6 42	River	1932	EC	Relgrad	SUI	7 14.2	

(*Continued.*)

Table A.5 *Continued.*

Year	Event	Place	Winner	Time (min s)	Comment
1932	OG	Los Angeles	GBR	8 00.0	
1933	EC	Budapest	HON	6 24	2300 m
1934	EC	Lucerne	AUS	7 47.6	
1935	EC	Berlin	HON	7 55.4	
1936	OG	Berlin	GER	8 16.1	
1937	EC	Amsterdam	ITA	7 18.5	
1938	EC	Milano	GER	7 23.2	
1947	EC	Lucerne	DEN	7 21.1	
1948	OG	Henley	GBR	7 21.1	River
1949	EC	Amsterdam	SUI	7 28.2	
1950	EC	Milano	SUI	7 17.5	
1951	EC	Macon	BEL	7 32.2	
1952	OG	Helsingfors	USA	8 20.7	
1953	EC	Copenhagen	URS	7 03.1	
1954	RC	Amsterdam	DEN	6 59.2	
1955	EC	Ghent	HON	6 59.1	
1956	EC	Bled	URS	7 10.5	
1956	OG	Melbourne	USA	7 55.4	
1957	EC	Duisburg	GBR	6 57.0	
1958	EC	Poznan	FIN	7 52.4	
1959	EC	Macon	GER	6 44.7	
1960	OG	Rome	URS	7 02.1	
1961	EC	Prague	GER	7 01.9	
1962	WC	Lucerne	GER	6 54.6	
1963	EC	Copenhagen	ITA	6 53.3	
1964	EC	Amsterdam	NDL	6 42.6	
1964	OG	Tokyo	CAN	7 32.94	
1965	EC	Duisburg	DEN	7 29.3	
1966	WC	Bled	RDA	6 53.96	
1967	EC	Vichy	USA	7 45.98	
1967	NAC	St Catharines	USA	7 21.5	
1968	OG	Mexico	RDA	7 26.56	
1969	EL	Klagenfurt	USA	7 11.73	
1970	WC	St Catharines	RDA	6 57.81	
1971	EC	Copenhagen	RDA	6 43.40	
1972	OG	Munich	RDA	6 53.16	
1973	EC	Moscow	ROU	7 39.10	
1974	WC	Lucerne	RDA	6 59.09	
1975	WC	Nottingham	RDA	7 06.40	
1976	OG	Montreal	RDA	7 23.31	
1977	WC	Amsterdam	URS	7 06.19	
1978	WC	L. Karapiro	RDA	7 00.92	
1979	WC	Bled	RDA	6 42.63	
1980	OG	Moscow	RDA	6 48.01	
1981	WC	Munich	URS	7 15.06	
1982	WC	Lucerne	NOR	6 41.98	
1983	WC	Duisburg	RDA	6 35.85	
1984	OG	Los Angeles	ROU	6 45.39	
1985	WC	Hazewinkel	URS	6 38.39	
1986	WC	Nottingham	URS	6 42.37	
1987	WC	Copenhagen	GBR	7 11.20	
1988	OG	Seoul	GBR	6 36.84	
1990	WC	Tasmania	GER	7 07.91	
1991	WC	Vienna	GBR	6 21.35	
1992	OG	Barcelona	GBR	6 27.72	
1993	WC	Racice	GBR	6 36.98	
1994	WC	Indianapolis	GBR	6 18.65	
1995	WC	Tampere	GBR	6 28.11	
1996	OG	Atlanta	GBR	6 20.09	
1997	WC	Aiguebelette	FRA	6 27.69	
1998	WC	Cologne	GER	6 22.32	
1999	WC	St Catharines	AUS	6 19.00	
2000	OG	Sydney	FRA	6 32.97	
2001	WC	Lucerne	GBR	6 27.57	
2002	WC	Seville	GBR	6 14.27	
2003	WC	Milano	AUS	6 19.31	
2004	OG	Athens	AUS	6 30.76	
2005	WC	Gifu	NZL	6 52.51	
2006	WC	Eton	AUS	6 18.00	

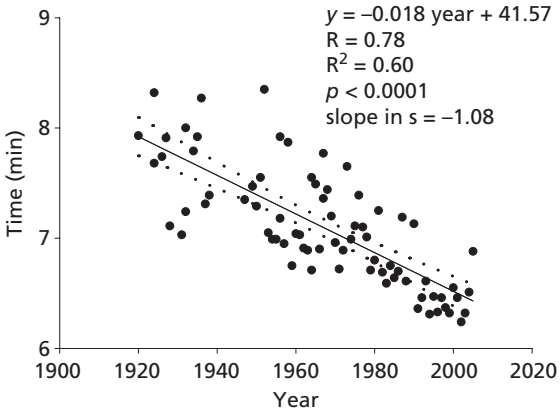

Fig. A.5 Men's pair.

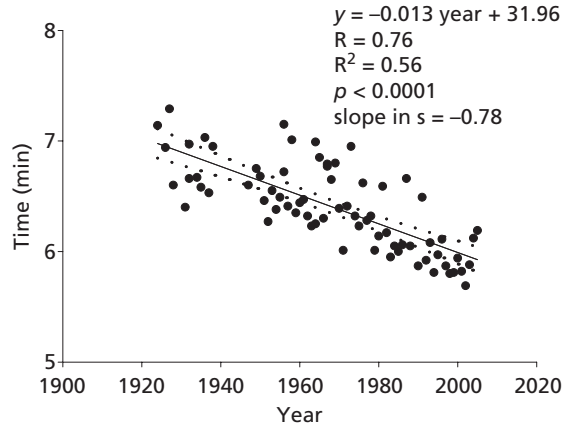

Fig. A.6 Men's four.

Table A.6 Winning results obtained in men's coxless four (M4–).

Year	Event	Place	Winner	Time (min s)	Comment	Year	Event	Place	Winner	Time (min s)	Comment
1900	OG	Paris	BEL	7 16.8	River	1953	EC	Copenhagen	DEN	6 33.2	
1904	OG	St Louis	USA	9 53.8	River	1954	EC	Amsterdam	ITA	6 22.8	
1908	OG	Henley	GBR	8 32.4	2414 m	1955	EC	Ghent	SUI	6 29.2	
1924	OG	Paris	GBR	7 08.6		1956	EC	Bled	ITA	6 42.9	
1925	EC	Prague	SUI	6 13.6	River	1956	OG	Melbourne	CAN	7 08.8	
1926	EC	Lucerne	SUI	6 56.2		1957	EC	Duisburg	GER	6 24.6	
1927	EC	Como	ITA	7 17.6		1958	EC	Poznan	GER	7 00.8	
1928	OG	Amsterdam	GBR	6 36.0		1959	EC	Macon	SUI	6 21.03	
1929	EC	Bydgoszcz	ITA	5 56.8	1750 m	1960	OG	Rome	USA	6 26.26	
1930	EC	Liege	ITA	5 53.4	River	1961	EC	Prague	ITA	6 28.29	
1931	EC	Paris	SUI	6 24		1962	WC	Lucerne	GER	6 19.24	
1932	EC	Belgrad	BON	6 39.8		1963	RC	Copenhagen	GER	6 13.88	
1932	OG	Los Angeles	GBR	6 58 2		1964	EC	Amsterdam	GER	6 15.10	
1933	EC	Budapest	DEN	6 04.6	2300 m	1964	OG	Tokyo	DEN	6 59.30	
1934	EC	Lucerne	GER	6 40.4		1965	EC	Duisburg	URS	6 50.99	
1935	EC	Berlin	SUI	6 34.9		1966	WC	Bled	RDA	6 18.41	
1936	OG	Berlin	GER	7 01.8		1967	EC	Vichy	RDA	6 47.50	
1937	EC	Amsterdam	GER	6 31.7		1967	NAC	St Catharines	RFA	6 46.41	
1938	EC	Milano	SUI	6 57.2		1968	OG	Mexico	RFA	6 39.18	
1947	EC	Lucerne	ITA	6 35.7		1969	EC	Klagenfurt	URS	6 47.90	
1948	OG	Henley	ITA	6 39.0	River	1970	WC	St Catharines	RDA	6 23.15	
1949	RC	Amsterdam	ITA	6 45.2		1971	EC	Copenhagen	RDA	6 00.72	
1950	EC	Milano	ITA	6 40.5		1972	OG	Munich	RDA	6 24.27	
1951	EC	Macon	BEL	6 27.8		1973	EC	Moscow	RDA	6 56.67	
1952	OG	Helsingfors	YOU	6 16.0		1974	WC	Lucerne	RDA	6 19.20	

(*Continued.*)

Table A.6 *Continued.*

Year	Event	Place	Winner	Time (min s)	Comment	Year	Event	Place	Winner	Time (min s)	Comment
1975	WC	Nottingham	RDA	6 13.81		1992	OG	Barcelona	AUS	5 55.04	
1976	OG	Montreal	RDA	6 37.42		1993	WC	Racice	FRA	6 04.54	
1977	WC	Amsterdam	RPA	6 16.73		1994	WC	Indianapolis	ITA	5 48.44	
1978	WC	L. Karapiro	URS	6 19.25		1995	WC	Tampere	ITA	5 58.28	
1979	WC	Bled	RDA	6 00.64		1996	OG	Atlanta	AUS	6 06.37	
1980	OG	Moscow	RDA	6 08.17		1997	WC	Aiguebelette	GBR	5 52.40	
1981	WC	Munich	URS	6 35.85		1998	WC	Cologne	GBR	5 48.06	
1982	WC	Lucerne	SUI	6 10.41		1999	WC	St Catharines	GBR	5 48.57	
1983	WC	Duisburg	RFA	5 57.02		2000	OG	Sydney	GBR	5 56.24	
1984	OG	Los Angeles	NZL	6 03.48		2001	WC	Lucerne	GBR	5 48.98	
1985	WC	Hazewinkel	RFA	6 00.19		2002	WC	Seville	GER	5 41.35	
1986	WC	Nottingham	USA	6 03.53		2003	WC	Milano	CAN	5 52.91	
1987	WC	Copenhagen	RDA	6 39.70		2004	OG	Athens	GBR	6 06.98	
1988	OG	Seoul	RDA	6 03.11		2005	WC	Gifu	GBR	6 11.59	
1990	WC	Tasmania	AUS	5 52.20		2006	WC	Eton	GBR	5 43.75	
1991	WC	Vienna	AUS	6 29.69							

Table A.7 Winning results in men's lightweight four (LM4–).

Year	Event	Place	Winner	Time (min s)	Year	Event	Place	Winner	Time (min s)
1974	WC	Lucerne	AUS	6 38.12	1991	WC	Vienna	GBR	5 57.60
1975	WC	Nottingham	FRA	6 47.31	1993	WC	Racice	USA	6 03.27
1976	WC	Villach	FRA	6 29.94	1994	WC	Indianapolis	DEN	5 53.77
1977	WC	Amsterdam	FRA	6 30.00	1995	WC	Tampere	ITA	6 16.46
1978	WC	Copenhagen	SUI	6 33.90	1996	OG	Atlanta	DEN	6 09.58
1979	WC	Bled	GBR	6 23.46	1997	WC	Aiguebelette	DEN	5 54.35
1980	WC	Hazewinkel	AUS	6 12.35	1998	WC	Cologne	DEN	6 01.53
1981	WC	Munich	AUS	6 22.32	1999	WC	St Catharines	DEN	6 45.63
1982	WC	Lucerne	ITA	6 17.79	2000	OG	Sydney	FRA	6 01.68
1983	WC	Duisburg	ESP	6 16.47	2001	WC	Lucerne	AUT	5 53.55
1984	WC	Montreal	ESP	6 09.39	2002	WC	Seville	DEN	5 47.21
1985	WC	Hazewinkel	RFA	6 12.44	2003	WC	Milano	DEN	6 10.46
1986	WC	Nottingham	ITA	6 18.26	2004	OG	Athens	DEN	6 01.39
1987	WC	Copenhagen	RFA	6 42.14	2005	WC	Gifu	FRA	5 47.91
1988	WC	Milan	ITA	6 09.48	2006	WC	Eton	CHN	5 49.43
1990	WC	Tasmania	GER	7 03.68					

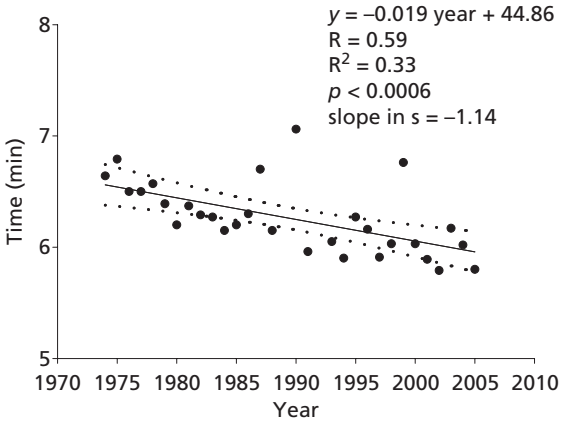

Fig. A.7 Lightweight men's four.

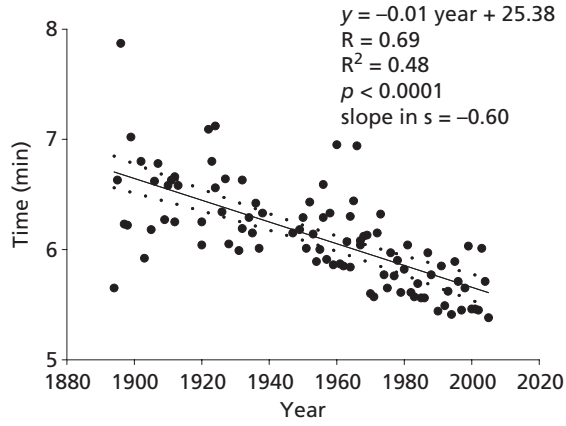

Fig. A.8 Men's coxed eight.

Table A.8 Winning results in men's eight (M8+).

Year	Event	Place	Winner	Time (min s)	Comment
1893	EC	Orta	FRA	10 14	3000 m
1894	EC	Macon	FRA	5 39	
1895	EC	Ostende	FRA	6 38	
1896	EC	Geneva	FRA	7 52	
1897	EC	Pallanza	BEL	6 14	
1898	EC	Torin	BEL	6 13	
1899	EC	Ostende	BEL	7 01	
1900	EC	Paris	BEL	5 24	1700 m
1900	OG	Paris	USA	6 09.8	River
1901	EC	Zürich	BEL	6 57	River
1902	EC	Strasbourg	BEL	6 48	
1903	EC	Venice	BEL	5 55	
1904	EC	Paris	BEL		
1904	OG	St Louis	USA	7 50.0	River
1905	EC	Ghent	FRA	6 11	
1906	EC	Pallanza	BEL	6 37	
1907	EC	Strasbourg	BEL	6 47	
1908	EC	Lucerne	BEL	6 45	River
1908	OG	Henley	GBR	7 56.0	2414 m
1909	EC	Juvisy	FRA	6 16	
1910	EC	Ostende	BEL	6 35	
1911	EC	Como	ITA	6 38	
1912	EC	Geneva	SUI	6 39.8	
1912	OG	Stockholm	GBR	6 15.0	
1913	EC	Ghent	GER	6 35	
1920	EC	Macon	SUI	6 15	
1920	OG	Antwerp	USA	6 02.6	
1921	EC	Amsterdam	SUI	6 40.6	1800 m
1922	EC	Barcelona	FRA	7 05.4	
1923	EC	Como	ITA	6 48	
1924	EC	Zürich	NDL	7 07	
1924	OG	Paris	USA	6 33.4	
1925	EC	Prague	SUI	5 41.8	River
1926	EC	Lucerne	NDL	6 20.6	
1927	EC	Como	ITA	6 38.4	
1928	OG	Amsterdam	USA	6 03.2	
1929	EC	Bydgoszcz	ITA	5 54.8	1750 m
1930	EC	Liege	USA	5 27.4	River
1931	EC	Paris	FRA	5 59 4	
1932	EC	Belgrad	YOU	6 11.4	
1932	OG	Los Angeles	USA	6 37.6	
1933	EC	Budapest	HON	5 44.2	2300 m
1934	EC	Lucerne	HON	6 17.4	
1935	EC	Berlin	HON	6 09.2	
1936	OG	Berlin	USA	6 25.4	
1937	EC	Amsterdam	ITA	6 00.5	
1938	EC	Milan	GER	6 19.9	
1947	EC	Lucerne	ITA	6 08.7	
1948	OG	Henley	USA	5 56.7	River
1949	EC	Amsterdam	ITA	6 11	

(*Continued.*)

Table A.8 *Continued.*

Year	Event	Place	Winner	Time (min s)	Comment
1950	RC	Milan	ITA	6 17.3	
1951	EC	Macon	GBR	6 00.4	
1952	OG	Helsingfors	USA	6 25.9	
1953	EC	Copenhagen	URS	6 08.1	
1954	EC	Amsterdam	URS	5 53.3	
1955	EC	Ghent	HON	5 59.7	
1956	EC	Bled	TCH	6 17.5	
1956	OG	Melbourne	USA	6 35.2	
1957	EC	Duisburg	ITA	5 54.3	
1958	EC	Poznan	ITA	6 19.5	
1959	EC	Macon	GER	5 51.7	
1960	OG	Rome	GER	6 57.18	
1961	EC	Prague	ITA	5 52.23	
1962	WC	Lucerne	GER	5 50.83	
1963	EC	Copenhagen	GER	6 04.19	
1964	EC	Amsterdam	GER	5 50.60	
1964	OG	Tokyo	USA	6 18.23	
1965	EC	Duisburg	GER	6 26.33	
1966	WC	Bled	RFA	6 56.28	
1967	EC	Vichy	RFA	6 04.89	
1967	NAC	St Catharines	NZL	6 02.41	
1968	OG	Mexico	RFA	6 07.00	
1969	EC	Klagenfurt	RDA	6 07.53	
1970	WC	St Catharines	RDA	5 36.10	
1971	EC	Copenhagen	NZL	5 33.92	
1972	OG	Munich	NZL	6 08.94	
1973	EC	Moscow	RDA	6 19.02	
1974	WC	Lucerne	USA	5 46.37	
1975	WC	Nottingham	RDA	5 39.01	
1976	OG	Montreal	RDA	5 58.29	
1977	WC	Amsterdam	RDA	5 45.36	
1978	WC	L. Karapiro	RDA	5 24.25	
1979	WC	Bled	RDA	5 36.41	
1980	OG	Moscow	RDA	5 49.05	
1981	WC	Munich	URS	6 02.30	
1982	WC	Lucerne	NZL	5 36.99	
1983	WC	Duisburg	NZL	5 34.39	
1984	OG	Los Angeles	CAN	5 41.32	
1985	WC	Hazewinkel	URS	5 33.71	
1986	WC	Nottingham	AUS	5 33.54	
1987	WC	Copenhagen	USA	5 58.83	
1988	OG	Seoul	RFA	5 46.05	
1990	WC	Tasmania	GER	5 26.62	
1991	WC	Vienna	GER	5 50.98	
1992	OG	Barcelona	CAN	5 29.53	
1993	WC	Racice	GER	5 37.08	
1994	WC	Indianapolis	USA	5 24.50	
1995	WC	Tampere	GER	5 53.40	
1996	OG	Atlanta	NDL	5 42.74	
1997	WC	Aiguebelette	USA	5 27.20	
1998	WC	Cologne	USA	5 38.78	
1999	WC	St Catharines	USA	6 01.58	
2000	OG	Sydney	ROM	5 27.48	
2001	WC	Lucerne	ROM	5 27.48	
2002	WC	Seville	CAN	5 26.92	
2003	WC	Milano	CAN	6 00.44	
2004	OG	Athens	USA	5 42.48	
2005	WC	Gifu	USA	5 22.75	
2006	WC	Eton	GER	5 21.85	

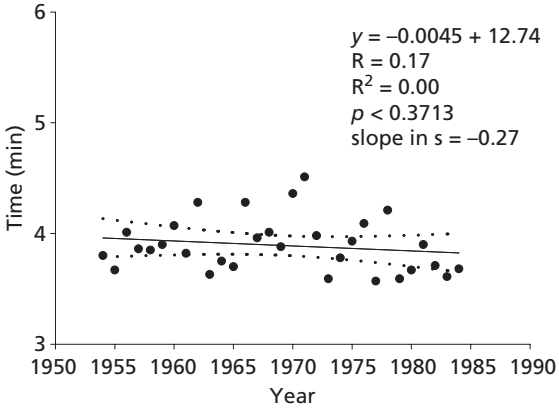

Fig. A.9 Women's single sculls (1000 m).

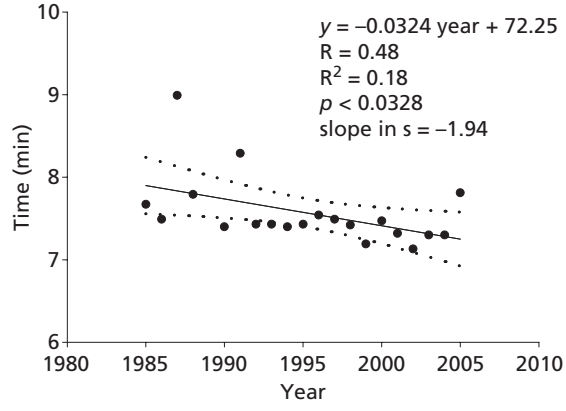

Fig. A.10 Women's single sculls (2000 m).

Table A.9 Winning results in women's single scull (W1x) over 1000 m.

Year	Event	Place	Winner	Time (min s)	Year	Event	Place	Winner	Time (min s)
1954	EC	Amsterdam	URS	3 48.1	1970	EC	Tata	RDA	4 21.62
1955	EC	Bukarest	URS	3 40.1	1971	EC	Copenhagen	RDA	4 30.75
1956	EC	Bled	RFA	4 00.6	1972	EC	Brandenburg	NDL	3 59.02
1957	EC	Duisburg	URS	3 51.7	1973	EC	Moscow	URS	3 59.02
1958	EC	Poznan	HaN	3 50.9	1974	WC	Lucerne	RDA	3 46.52
1959	EC	Macon	HaN	3 53.9	1975	WC	Nottingham	RDA	3 55.75
1960	RC	London	HON	4 04.40	1976	OG	Montreal	RDA	4 05.56
1961	EC	Prague	HaN	3 48.96	1977	WC	Amsterdam	RDA	3 34.31
1962	EC	Berlin	TCH	4 17.0	1978	WC	L. Karapiro	RDA	4 12.49
1963	EC	Moscow	URS	3 37.70	1979	WC	Bled	ROU	3 35.44
1964	EC	Amsterdam	URS	3 44.70	1980	OG	Moscow	ROD	3 40.69
1965	EC	Duisburg	URS	3 42.20	1981	WC	Munich	ROD	3 54.46
1966	EC	Amsterdam	URS	4 16.87	1982	WC	Lucerne	URS	3 42.83
1967	EC	Vichy	RDA	3 57.67	1983	WC	Duisburg	RDA	3 36.51
1968	EC	Berlin	RDA	4 00.79	1984	OG	Los Angeles	ROU	3 40.68
1969	EC	Klagenfurt	URS	3 53.01					

Table A.10 Winning results in women's single scull (W1x) over 2000 m.

Year	Event	Place	Winner	Time (min s)	Year	Event	Place	Winner	Time (min s)
1985	WC	Hazewinkel	RDA	7 40.37	1997	WC	Aiguebelette	BLR	7 29.30
1986	WC	Nottingham	RDA	7 29.60	1998	WC	Cologne	RUS	7 25.09
1987	WC	Copenhagen	BUL	8 59.26	1999	WC	St Catharines	BLR	7 11.68
1988	OG	Seoul	RDA	7 47.19	2000	OG	Sydney	BLR	7 28.14
1990	WC	Tasmania	GER	7 24.10	2001	WC	Lucerne	GER	7 19.25
1991	WC	Vienna	CAN	8 17.58	2002	WC	Seville	BUL	7 07.71
1992	OG	Barcelona	ROM	7 25.54	2003	WC	Milano	BUL	7 18.12
1993	WC	Racice	GER	7 26.00	2004	OG	Athens	GER	7 18.12
1994	WC	Indianapolis	DEN	7 23.96	2005	WC	Gifu	BLR	7 48.35
1995	WC	Tampere	SWE	7 26.00	2006	WC	Eton	BLR	7 11.02
1996	OG	Atlanta	BLR	7 32.21					

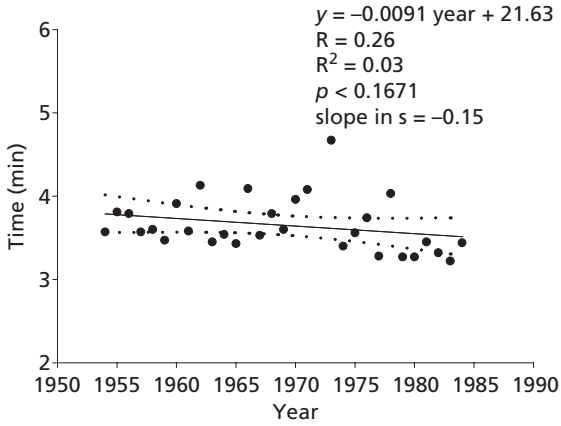

Fig. A.11 Women's double sculls (1000 m).

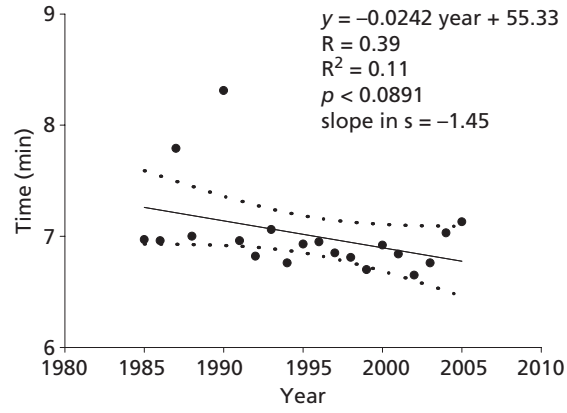

Fig. A.12 Women's double sculls (2000 m).

Table A.11 Winning results in women's double sculls (W2x) over 1000 m.

Year	Event	Place	Winner	Time min s	Year	Event	Place	Winner	Time min s
1954	EC	Amsterdam	URS	3 33.9	1970	EC	Tata	RDA	3 57.55
1955	EC	Bukarest	URS	3 48.4	1971	EC	Copenhagen	URS	4 04.55
1956	EC	Bled	TCH	3 17.5	1972	EC	Brandenburg	URS	
1957	EC	Duisburg	URS	3 34.0	1973	EC	Moscow	URS	3 40.05
1958	EC	Poznan	URS	3 36.0	1974	WC	Lucerne	URS	3 24.00
1959	EC	Macon	URS	3 28.0	1975	WC	Nottingham	URS	3 33.70
1960	EC	London	URS	3 54.75	1976	OG	Montreal	BUL	3 44.36
1961	EC	Prague	URS	3 34.92	1977	WC	Amsterdam	RDA	3 16.83
1962	EC	Berlin	URS	4 08.1	1978	WC	L. Karapiro	BUL	4 01.94
1963	EC	Moscow	URS	3 27.05	1979	WC	Bled	RDA	3 15.95
1964	EC	Amsterdam	URS	3 32.43	1980	OG	Moscow	URS	3 16.27
1965	EC	Duisburg	URS	3 25.56	1981	WC	Munich	URS	3 27.06
1966	EC	Amsterdam	RDA	4 05.21	1982	WC	Lucerne	URS	3 19.47
1967	EC	Vichy	URS	3 31.65	1983	WC	Duisburg	RDA	3 13.44
1968	EC	Berlin	RDA	3 47.13	1984	OG	Los Angeles	ROU	3 26.75
1969	EC	Klagenfurt	RDA	3 35.87					

Table A.12 Winning results in women's double sculls (W2x) over 2000 m.

Year	Event	Place	Winner	Time (min s)	Year	Event	Place	Winner	Time (min s)
1985	WC	Hazewinkel	RDA	6 58.80	1997	WC	Aiguebelette	GER	6 51.07
1986	WC	Nottingham	RDA	6 57.71	1998	WC	Cologne	GBR	6 48.85
1987	WC	Copenhagen	BUL	7 47.89	1999	WC	St Catharines	GER	6 41.98
1988	OG	Seoul	RDA	7 00.48	2000	OG	Sydney	GER	6 55.44
1990	WC	Tasmania	GER	8 18.63	2001	WC	Lucerne	GER	6 50.20
1991	WC	Vienna	CAN	6 57.42	2002	WC	Seville	NZL	6 38.78
1992	OG	Barcelona	GER	6 49.00	2003	WC	Milano	NZL	6 45.79
1993	WC	Racice	NZL	7 03.42	2004	OG	Athens	NZL	7 01.79
1994	WC	Indianapolis	NZL	6 45.30	2005	WC	Gifu	NZL	7 08.03
1995	WC	Tampere	CAN	6 55.76	2006	WC	Eton	AUS	6 47.67
1996	OG	Atlanta	CAN	6 56.84					

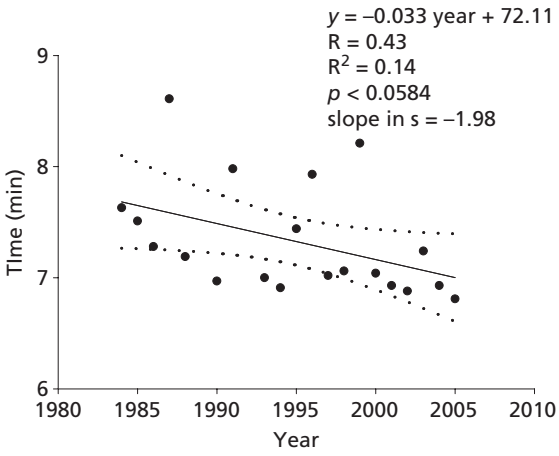

Fig. A.13 Lightweight women's double sculls.

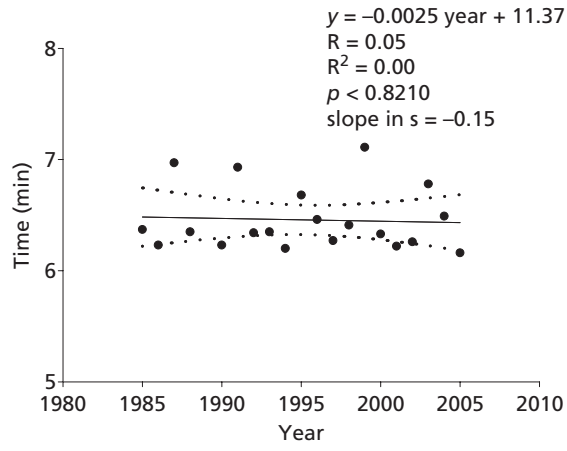

Fig. A.14 Women's quadruple sculls.

Table A.13 Winning results in women's light weight double sculls (LW2X).

Year	Event	Place	Winner	Time (min s)
1984	WC	Montreal	DEN	7 38.16
1985	WC	Hazewinkel	GBR	7 30.52
1986	WC	Nottingham	USA	7 17.13
1987	WC	Copenhagen	CAN	8 36.60
1988	WC	Milano	NDL	7 11.85
1990	WC	Tasmania	DEN	6 57.96
1991	WC	Vienna	GER	7 58.53
1993	WC	Racice	CAN	6 59.74
1994	WC	Indianapolis	CAN	6 54.85
1995	WC	Tampere	USA	7 26.45
1996	OG	Atlanta	USA	7 55.99
1997	WC	Aiguebelette	GER	7 00.93
1998	WC	Cologne	USA	7 03.73
1999	WC	St Catharines	ROM	8 12.67
2000	OG	Sydney	ROM	7 02.64
2001	WC	Lucerne	GER	6 55.55
2002	WC	Seville	AUS	6 52.84
2003	WC	Milano	GER	7 14.55
2004	OG	Athens	ROM	6 56.05
2005	WC	Gifu	GER	6 48.47
2006	WC	Eton	CHN	6 55.12

Table A.14 Winning results in women's quadruple scull over 2000 m.

Year	Event	Place	Winner	Time (min s)
1985	WC	Hazewinkel	RDA	6 22.47
1986	WC	Nottingham	RDA	6 13.91
1987	WC	Copenhagen	RDA	6 58.42
1988	OG	Seoul	RDA	6 21.06
1990	WC	Tasmania	GER	6 14.08
1991	WC	Vienna	GER	6 55.85
1992	OG	Barcelona	GER	6 20.18
1993	WC	Racice	CHN	6 21.07
1994	WC	Indianapolis	GER	6 11.73
1995	WC	Tampere	GER	6 40.80
1996	OG	Atlanta	GER	6 27.44
1997	WC	Aiguebelette	GER	6 16.15
1998	WC	Cologne	GER	6 24.38
1999	WC	St Catharines	GER	7 06.53
2000	OG	Sydney	GER	6 19.58
2001	WC	Lucerne	GER	6 12.95
2002	WC	Seville	GER	6 15.66
2003	WC	Milano	AUS	6 46.52
2004	OG	Athens	GER	6 29.29
2005	WC	Gifu	GBR	6 09.59
2006	WC	Eton	RUS	6 11.99

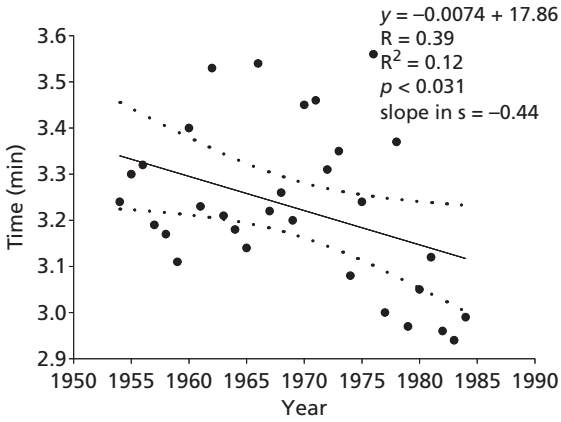

Fig. A.15 Women's coxed eight (1000 m).

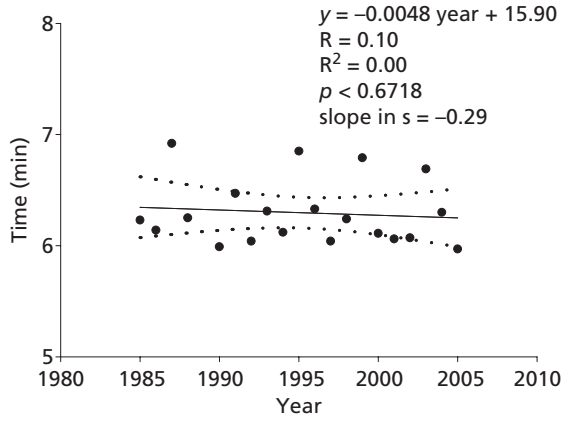

Fig. A.16 Women's coxed eight (2000 m).

Table A.15 Winning results in women eight (W8+) over 1000 m.

Year	Event	Place	Winner	Time (min s)
1954	EC	Amsterdam	URS	3 14.5
1955	EC	Bukarest	URS	3 17.8
1956	EC	Bled	URS	3 19.4
1957	EC	Duisburg	URS	3 11.4
1958	EC	Poznan	URS	3 10.3
1959	EC	Macon	URS	3 06.3
1960	EC	London	URS	3 23.70
1961	EC	Prague	URS	3 13.59
1962	EC	Berlin	URS	3 32.00
1963	EC	Moscow	URS	3 12.75
1964	EC	Amsterdam	RDA	3 10.63
1965	EC	Duisburg	URS	3 08.13
1966	EC	Amsterdam	RDA	3 32.41
1967	EC	Vichy	URS	3 13.20
1968	EC	Berlin	RDA	3 15.62
1969	EC	Klagenfurt	RDA	3 11.92
1970	EC	Tata	RDA	3 27.05
1971	EC	Copenhagen	URS	3 27.78
1972	EC	Brandenburg	URS	3 18.53
1973	EC	Moscow	URS	3 21.12
1974	WC	Lucerne	RDA	3 04.82
1975	WC	Nottingham	RDA	3 14.53
1976	OG	Montreal	RDA	3 33.32
1977	WC	Amsterdam	RDA	3 00.23
1978	WC	L. Karapiro	URS	3 22.00
1979	WC	Bled	URS	2 58.09
1980	OG	Moscow	RDA	3 03.32
1981	WC	Munich	URS	3 07.58
1982	WC	Lucerne	URS	2 57.97
1983	WC	Duisburg	URS	2 56.22
1984	OG	Los Angeles	USA	2 59.80

Table A.16 Winning results in women eight (W8+) over 2000 m.

Year	Event	Place	Winner	Time (min s)
1985	WC	Hazewinkel	URS	6 14.00
1986	WC	Nottingham	URS	6 08.76
1987	WC	Copenhagen	ROU	6 55.61
1988	OG	Seoul	RDA	6 15.17
1990	WC	Tasmania	ROM	5 59.26
1991	WC	Vienna	CAN	6 28.20
1992	OG	Barcelona	CAN	6 02.62
1993	WC	Racice	ROM	6 18.88
1994	WC	Indianapolis	GER	6 07.42
1995	WC	Tampere	USA	6 50.73
1996	OG	Atlanta	ROM	6 19.73
1997	WC	Aiguebelette	ROM	6 02.40
1998	WC	Cologne	ROM	6 14.62
1999	WC	St Catharines	ROM	6 47.66
2000	OG	Sydney	ROM	6 06.44
2001	WC	Lucerne	AUS	6 03.66
2002	WC	Seville	USA	6 04.25
2003	WC	Milano	GER	6 41.23
2004	OG	Athens	ROM	6 17.70
2005	WC	Gifu	AUS	5 58.10
2006	WC	Eton	USA	5 55.50